American Aviation

The Independent Voice of American Aeronautics

OCTOBER 1, 1946

Trivial Fault-Finding

COMPLAINTS are appearing again about the Civil Aeronautics Administration—this time about the picayune activities of the general inspection service.

The life of an inspector in any line of business isn't a happy one. It's usually no fun being a policeman. And aviation is no exception to the general experience that in any group of people being regulated there are always some who seek to 'get by.'

Fortnightly Review

But the scheduled airlines are remarkably clean from any 'get by' attitude. They have learned for themselves the importance of safety. Hence the efforts of the CAA general inspection service to 'make it tough' for some of the carriers has given rise to speculation as to why the heat has been put on. Inspectors have been insisting upon trivial and minute requirements to such an extent that one can only be suspicious that there is more to the situation than meets the eye.

The recent difficulties have been concerned chiefly, although not entirely, with communications. The airlines today employ the finest and most experienced talent in the nation—men who served with distinction during the war and who have had the broadest background possible in this field. Placed side by side with the relatively inexperienced inspectors, there is no sound comparison in ability and knowledge and know-how. Yet the fault-finding, which has created at least one serious delay, has become quite serious.

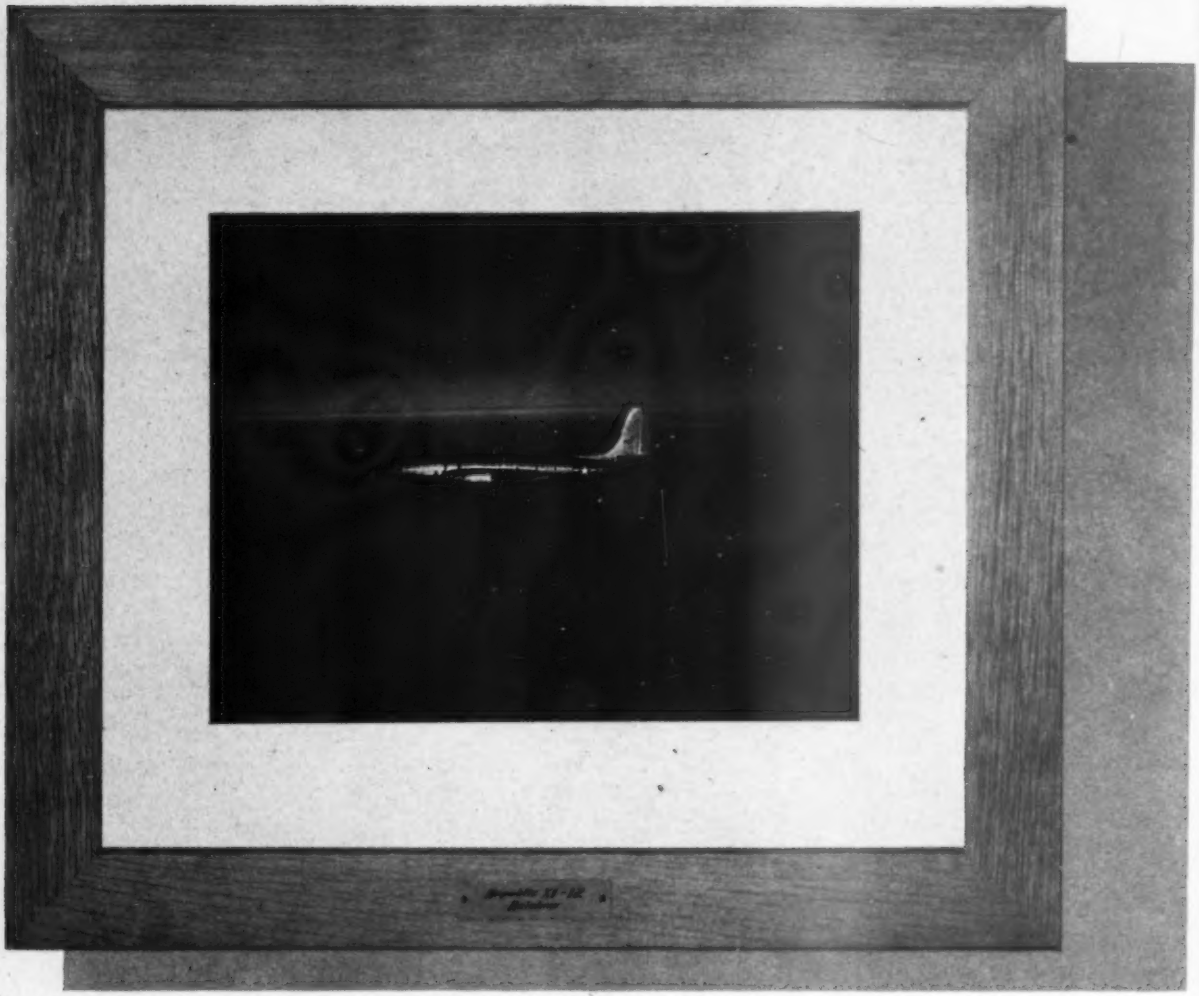
Could it be that the CAA is miffed by the decision of the Federal Communications Commission to permit the airlines to operate their own communication stations outside the United States instead of giving the exclusive right to operate these stations to the CAA? It seems far-fetched, but stranger things than that have happened before. It is the only logical explanation to date for the time-wasting and costly witch-hunts which inspectors have been making. In these days of expansion there is no time for bureaucratic fuddle-duddle. If general inspection wants opportunities to inspect operations and communications, it should not have far to look. It does not need to harass unnecessarily the carriers that know better than the CAA the price of negligence in safety.

(Turn to page 6)

Northrop To Build Tri-Motor

John K. Northrop, president of Northrop Aircraft, announced that his company will produce the "Pioneer," a tri-motor, high-wing aircraft suitable for operations into landing fields in undeveloped foreign areas and for feederlines. (Story on Page 16).

In This Issue



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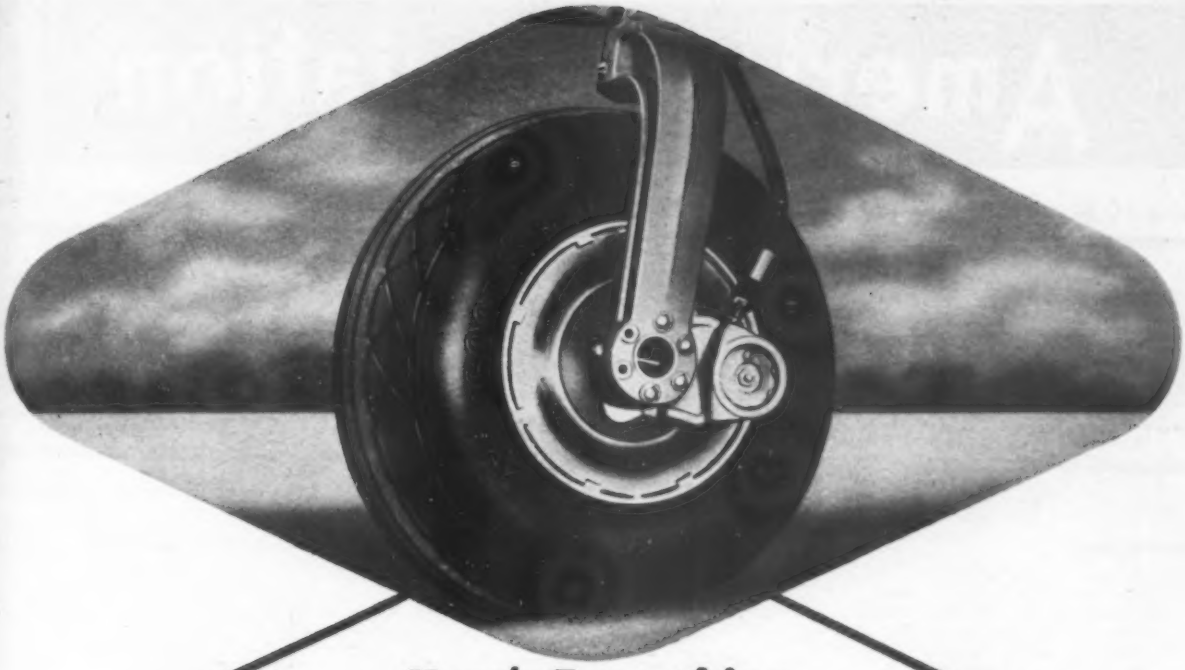

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American Aviation

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Other Publications and Services:

American Aviation Daily: The only daily news service for the aviation industry. Published daily except Sundays and holidays since 1939. Dispatched via airmail or surface mail for overnight delivery in the United States. Subscriptions: $15 one month, $170 one year. Airmail delivery to points outside the United States at additional cost to cover postage. Service Bureau available to all subscribers. CLIFFORD GUEST, Managing Editor.

International Aviation: A weekly newsletter of aviation trends and news in foreign countries. Published on Friday of each week and dispatched, via first-class surface mail. Editorial representatives in foreign capitals. Subscriptions: $100 one year (52 issues). Airmail delivery available at additional cost to cover postage. Service Bureau available to all subscribers. FRANK M. HOLZ, Managing Editor.

American Aviation Directory: Published twice a year, Spring and Fall. Complete reference data on administrative and operating personnel of airlines, aircraft and engine manufacturers, accessory and equipment manufacturers, organizations, schools, U. S. and foreign aviation groups and departments, etc. Completely cross-indexed by companies, activities, products and individuals. Single copy $5.00. Spring-Summer 1946 issue now available. DAVID SHAWE, Managing Editor.

American Aviation Traffic Guide: Monthly publication of airline schedules, rates and regulations for passenger and cargo transportation by commercial air transport. Supplements furnished subscribers covering changes occurring between issues. Subscriptions: U. S. and Latin America $7.50 one year (12 issues and supplements); Canada $8.00. All other countries $9.00. Published and revised from editorial offices at 139 North Clark Street, Chicago 2, Illinois. (Telephone: State 2154). H. B. WHITNEY, Managing Editor.

Research and Library Department: For the convenience of subscribers in obtaining aviation information; bibliographic data on aviation books and periodicals available. Address inquiries to American Aviation, Research and Library Dept., Washington 4, D. C. AGNES A. GAUTREAUX, Director of Research and Librarian.

DOUGLAS AD-1*

ATTACK-DOUGLAS

Skyraider

* AD-1 signifies "Attack-Douglas, Model No. 1." This new, simplified designation supercedes the previous designation of BT2D-1.

CHOSEN TO REARM THE NAVY'S POST-WAR CARRIER FLEET

● Outstanding characteristic of the Douglas AD-1 is its great load capacity: it carries *6,000* pounds of bombs, rockets, torpedoes, fire bombs, radar units or extra fuel tanks... *farther*... more than *50 mph faster*... than any other dive-bomber in service.

The unprecedented performance of the Skyraider results from major achievements of design simplification and production teamwork. For example—Douglas engineers made weight reduction a prime objective. Result: the AD-1 was completed at 1,800 pounds *less* than the Navy's acceptable weight, thus giving greater range and capacity.

The Navy wanted the AD-1 in a hurry. The Navy got it—from design start to test flight in 8½ months! Today a fleet of Skyraiders is taking shape on the production lines of the Douglas El Segundo Plant to equip the U. S. Navy with the safest, most versatile carrier-based plane of its great air arm. Thus Douglas once again meets the demand of the armed forces for a better airplane—in record time.

Such dependable performance, year after year, is the reason the Army and Navy—as well as the airlines—DEPEND ON DOUGLAS.

Douglas Aircraft Company, Inc.
Santa Monica, California

FUSELAGE DIVE BRAKES

Another Douglas First, these new brakes slow the Skyraider to less than 300 mph in vertical dives. In addition, they contribute to superb control in maneuvering, fighting and letting down.

Editorial

(Continued from Page 1)

The Pioneering Continues

LEST WE forget, the airplane is continuing to pioneer, to open up new fields of opportunity, and to provide new measurements of values of this versatile new vehicle of the air. Two recent items of top news are worthy of comment.

No more spectacular demonstration of the ability of the helicopter to perform useful unique services could be found than the rescue of survivors of the Sabena accident in Newfoundland. No surface vehicle and no other aerial vehicle could have performed the job. How many opportunities lie ahead for the helicopter! The pioneering Sikorsky machine has proved its worth in a multitude of ways but the Newfoundland rescue work caught the imagination of the whole world. The helicopter is one of the great inventions of all time; it has just begun to show what it can do for mankind.

Public imagination also was fired by the shipment at a cost of $1,200 of $87.50 worth of coke from New Jersey to Puerto Rico by Willis Air Service, an imaginative and aggressive non-scheduled operator. How relatively unimportant is the cost of transportation when a product or a part is essential to keeping open the doors of industry! We in a country of abundance have so often failed to appreciate the economic importance of air transportation in and to areas of scarcity. A factory was to be closed because of the lack of a small amount of coke. The time element was most important. Transportation cost became secondary. Only the airplane could perform the service. We have acquired the operating skills but we are just beginning to explore and tap the economic potentials which the airplane makes possible.

Scandinavian Salute

THOSE in American aviation who have observed since 1939 the preparations of the three Scandinavian countries for a trans-Atlantic airline service have been well impressed by the thoroughness of the planning by the three groups to establish a service with the highest safety and other operating standards. The Scandinavians set out to model their system after the finest in world aviation and they have, as a consequence, borrowed much from the United States. They have cooperated with the U. S. in all international endeavors, they believe in unrestricted air commerce, and they have proved with action that they intend to be among the leaders in world air transportation.

Within the last few weeks the Scandinavian Airlines System, comprising the airlines of Sweden, Norway and Denmark, inaugurated regular flights. Some sixty or seventy proving flights preceded the first commercial service. To mark the opening, the Scandinavians staged a dinner at the Waldorf-Astoria in New York which must have opened the eyes of many of the American guests. It was a fine, dignified affair and if it was not the envy of American airline companies who have done astonishingly poor public relations jobs for the opening of new routes, then it should have. If the Scandinavians have borrowed technical know-how from us, we could borrow to good advantage from the Scandinavians some of the mature stature and social aplomb which have characterized them in their intelligent handling of relations in this country.

Red Tape With Interest

HERE IS a "Believe it or not" for Robert Ripley:

Where can you travel without ever stepping foo on foreign soil and still have to pass through two separate U. S. customs and immigration inspections?

Answer: If you leave St. Thomas, Virgin Islands bound for San Juan, Puerto Rico (a 30-minute air trip) you fill out customs declaration and have your baggage examined at San Juan. If you then fly non-stop from San Juan to Miami, Florida, you go through customs inspection at Miami. At no time are you on any but U. S. soil.

Granted that St. Thomas, although in U. S. territory is a free port, there would seem to be an unnecessary delay and red tape on an air trip from there to the mainland. U. S. citizens who haven't been on foreign soil are subjected to as much red tape as aliens coming from far distances. Here is a project worthy of the attention of the newly-formed Committee for World Travel.

The Price of Safety

THE SOONER the world aviation organization, PICAO establishes rigid safety regulations for world air transport, the better it will be for all operators. The public will not tolerate accidents resulting from short-cuts. Today the public has faith in safe air transportation, but this faith will disappear with recurring fatal accidents. The public rarely distinguishes among transport airplanes.

We have the highest regard for foreign airlines endeavoring to find their mark in world air commerce, but there is good reason to believe that some operators have greatly under-estimated the skill and know-how required to operate safely today's airplanes on long routes such as the Atlantic crossing.

It is unfortunate, of course, that the Belgian airline operated by Sabena came to grief in Newfoundland. But it was much more unfortunate for world air transport that Sabena decided to carry passengers on charter on what should have been a proving flight. It is now only too evident that the chance wasn't worth taking. It never is. The Americans, the Canadians, the British, the Scandinavians and all others who have taken the time and effort to prepare properly, suffer because of that chance which didn't work out.

There are many disturbing reports arriving from some foreign sources—reports of lack of pilot training, lack of proving flights, poor maintenance and minimum of dispatching and weather clearances. Operators the world over must recognize that the barnstorming days are over. Companies that fail to assume proper responsibility for safety are a hindrance to those which have invested for

tunes in eliminating chance from their operations. Flying the Atlantic, or any over-ocean route, is serious business. There will be accidents as long as there are airlines, but there should be only those accidents which occur despite every precaution having been taken against having one. Taking chances has no place in today's common carrier air transportation.

A Railroad 'Short Course'

THE Southern Pacific Railroad has been running an advertisement in the national press entitled "A short course in Railroading for Airline executives." Not only has it created a good many healthy chuckles throughout the airline business (and we presume the railroad business, too), but it is noteworthy for its good humor and its good taste. It is, we think, an example of beneficial competitive advertising even though we can think of ample come-backs as far as the text arguments go.

The ad makes a point of half fares for children between 5 and 11, but the airlines are re-instating similar half-fares and had begun announcing these before the ad appeared. The ad failed to mention that berths are hardly necessary when most air trips can be taken in the course of a day, but the ad should, on the other hand, give the airline advertising men something to think about. We wish the Pullman Company would cease its grim theme of safety—which we consider highly offensive—and adopt some of the smooth technique of the Southern Pacific's advertising department. Like it or not, it was a *good* ad.

Improved Aviation Writing

INDUSTRY executives who remember painfully the often inept and inaccurate aviation newspaper writing before the war are commenting on the general improvement since the war. Such old-timers as Lauren Lyman of The New York *Times*, C. B. Allen of the New York *Herald Tribune*, and Devon Francis when he was aviation editor of *The Association Press*, and some others, knew their stuff, but few others did. Today Gill Wilson and C. B. Allen are providing top news for the *Herald Trib*, and John Stuart and Fred Graham are doing a fine job for The New York *Times*. James Strebig's reporting for *The Associated Press* has been of very high caliber and Charles Corddry has done a fine job for *The United Press*. There are others doing excellent jobs, too, but what impresses industry executives is the increased knowledge of, and appreciation for, industry problems. The razzle-dazzle days seem to be over.

WAYNE W. PARRISH

Wings of Yesterday

25 Years Ago

An aerial torpedo plane, radio controlled, was tested, Long Island to Pennsylvania. (Oct. 1, 1921.)

George Kirsch won the Deutsche de la Meurthe Cup Race at Etampes, France, flying 186 miles, three turns, in 69 min. 55 sec. His average speed was 173 m.p.h. (Oct. 1, 1921.)

U. S. Marine Corps planes completed five days maneuvers with East Coast Expeditionary Force at Wilderness Run, Virginia, making 204 flights. They flew 10,500 miles. (Oct. 2, 1921.)

J. L.-6 (Larsen) armored monoplane with 30 machine guns was exhibited at Bolling Field, Washington, D. C. (Oct. 2, 1921.)

Loening Monoplane "Flying Yacht" flew 188 miles in 80 minutes from Aberdeen, Md. to Port Washington, N. Y. (Oct. 7, 1921.)

Lt. Howard K. Ramey, U. S. A. S. in D.H.-4-B made a record flight from Washington to New York—a distance of 220 miles—in 79 minutes. (Oct. 11, 1921.)

15 Years Ago

Hugh Herndon, Jr. and Clyde Pangborn made first non-stop flight from Japan to the United States, flying from Tokyo to Wentachee, Washington, in 41 hrs. 13 min., winning $25,000 prize from the Japanese newspaper "Asahi." The flight was made in a Bellanca Pacemaker equipped with a Pratt and Whitney Wasp motor. (Oct. 4-5, 1931.)

Hugh Herndon, Jr. and Clyde Pangborn landed at Floyd Bennett Field, Brooklyn, New York, completing their flight around the world which was started on July 28. (Oct. 17, 1931.)

Letters

Landing Delays

To the Editor:

We read with interest your article on instrument landing delays as it appeared in the Sept. 1 issue of AMERICAN AVIATION.

Many of the municipalities in the United States are at this time baffled by the technical discussion necessary to arrive at decisions pertaining to airport facilities. It is extremely difficult to make any concrete plans without comparative figures on airport conditions as they pertain to other cities. Studies such as the one that appeared in your article help considerably to evaluate air traffic problems at the busy air terminals, and we certainly appreciate the implications in this study. Let's have more of them.

I would like to see AMERICAN AVIATION make a study of air traffic at 15 or 20 of the leading terminals in the United States, with their rank, in a quarterly report or, if possible, on a monthly basis. If municipalities could show the public the way their city ranks with regard to air traffic, it could certainly justify some of the forthcoming expenses necessary to provide facilities for this increased air traffic.

G. RICHARD CHALLINOR
Aviation Commissioner,
The Chamber of Commerce of Kansas City

Editor's Note: See Article on 25 busiest airports on page 13.

Here's Miss Bowen

To the Editor:

I enjoyed your article on National Airlines in your September 1 issue, which you supplement with pictures of Mr. Baker and five of his masculine executives. However, I can't help thinking that the article would

have been more decorative had you used a picture of Miss Helen Bowen to whom you refer in such a complimentary fashion. Let's have a picture of Miss Bowen in a coming issue.

A. M. deVOURSNEY
United Air Lines
Chicago, Illinois

Editor's Note: Here's the photo of Miss Bowen, supt. of passenger service for National Airlines. Age: 25. Hired as stewardess in 1941 and became chief stewardess within short time. Now has almost 100 stewardesses under her command in addition to food service, lost and found, and other duties. Despite National's claim that photo is a glamour shot, it does not do adequate justice to the subject.

Optimistic Article

To the Editor:

Fine work like yours in keeping our industry on its toes should not, in my opinion, be diminished by carelessly optimistic articles.

No. 7, Vol. 10, p. 22 of AMERICAN AVIATION contains an article entitled, "Airline Safety Record Shows Rapid Upswing in Ten Year Period." Headline and articles suggest we have done wonders over the past ten years. Data and graph, however, show that our safety peak was reached in 1939 and has since declined. The "Miles per Passenger Fatality Record of 1945" is practically equivalent to that of 1938, and we have never even approached our 1939 record.

Granted there are several reasons why this should be so, the facts appear to be that our "favorable" comparison with the Class I railroads results from their sharp downswing rather than our upswing.

J. M. VAN LAW
Larchmont, New York

Books

AERODYNAMICS. by A. Wiley Sherwood. McGraw-Hill Book Co., New York; 2[illegible] pages, illustrated; $2.75.

Particularly intended for aeronautical engineering students (the author is professor of aerodynamics, Glenn L. Martin College of Engineering and Aeronautical Sciences, University of Maryland), this basic text dwells about equally on theory and mathematics, and on experiment and practical application. Each chapter ends with problems to test understanding of subject matter.

AIRCRAFT CARBURETION. by Robert H. Thorner; John Wiley & Sons, Inc., New York; 394 pp. with illustrations, diagrams and formulae; $3.50.

Specialties in the field of carburetion, fuel injection and supercharging will appreciate this thorough work. Initial chapters deal with principles of physics applicable to aircraft carburetion, followed by a detailed description of carburetors and injection systems in current use on aircraft and by additional chapters on metering systems, testing methods, mixture ratios and operating economy. Pilots and maintenance men also are likely to find this book worth considerable study.

AIR TRANSPORT. By E. D. Weiss. Published by Art and Educational Publishers, Ltd. London. Price 2/6. 59 pp.

A discussion of air transport problems and accounts of spectacular achievements in the industry as set down by a recognized aviation authority. The index includes a list of books, pamphlets and official publications which may be of interest to anyone wishing to compare American and European aviation methods.

Booklets

A comprehensive engineering handbook on soils in relation to airport construction, and the use of aerial photographs in selecting airport sites, is now available for two dollars from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The best was prepared by David S. Jenkins of the CAA and members of the faculty of Purdue University. When writing for the book, applicants should include the title "The Origin, Distribution and Airphoto Identification of United States Soils, With Special Reference To Airport and Highway Engineering." The book is expected to find wide use among those engaged in the seven year Federal airport construction program.

The aviation council of metropolitan St. Louis has issued a pamphlet entitled "Factual Statements for Investors in St. Louis' Future in Aviation," pointing out the city's urgent need for airport improvements. The pamphlet is to be distributed to more than 1000 business firms in the city and to others interested in aviation development in the vicinity of the Missouri city.

An address, "Industrial Planning, A Safeguard of Peace," given by J. Carlton Ward, Jr., president of the Fairchild Engine and Airplane Corp., before the semi-annual meeting of the American Society of Mechanical Engineers at Detroit, June 18, has been printed in booklet form. Copies are available from the company offices, 30 Rockefeller Plaza, N. Y. C., 20. The talk entailed a detailed analysis of aircraft production before and during the war, both in the U. S. and Nazi Germany.

Imagine Solar having Paul Revere's strange problem!

PAUL REVERE'S fame got in the way of his reputation. Everybody knows about his horseback ride, but few remember him as America's foremost silversmith... the leader in his field.

While Solar hasn't flashed any midnight alarms, our reputation is being overshadowed too. Like Paul, we're metal craftsmen—stainless steel fabricators. And we have quite a name as leading producers of intricate stainless aircraft parts (exhaust systems for P-38's, B-29's, P-80 jets). In fact this pre-eminence in the aviation field has obscured Solar's extensive production for other industries*.

By remembering Solar as specializers in stainless steel fabrication *serving many industries*, you may well find the answer to *your* stainless steel problem... by taking advantage of Solar's exclusive Sol-A-Die process, backed by 15 years of experience with stainless. Call or write Solar today.

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HANGAR FLYING

THE UNHATCHABLE EGG

Research engineers out at Lockheed have been crowing about their new egg that flies but won't hatch. It's a *Constellation* engine assembly called the Universal Power Egg, and the way it simplifies maintenance is something.

For instance: gone are the antics that crews used to go through trying to expose an engine on a transport. Hinged, detachable cowl panels on the Egg flip back like the hood on a car, and there's your engine.

What's more, the oil tank in the Egg is forward of the fire wall. This may not sound exactly sensational, but one of the big time-eaters during engine changes has always been the inaccessibility of the tanks for cleaning.

The Power Egg is so universal that, theoretically, you could install Wrights on one side of the *Constellation* and P&W's on the other. No airline has tried this.

The previous Egg was all right; but Lockheed characteristically developed a better one. And it's this kind of self-starting ingenuity that makes good pilot-room talk and better ships.

L to L for L

Background

(Significant Developments and Ey...

Tackling the Taxi Problem: One of the biggest beefs from airline users concerns the essential proposition of getting back and forth from the city to the airport—which includes the time involved, the adequacy of service and courtesy of treatment and the cost. A step toward "scientific analysis of the problem in one of the trouble spots—New York—has been taken by the limousine operators, Carey Airport Services, Inc., which has engaged the engineering firm of Ebasco Services, Inc., to make a complete survey of its operations in metropolitan New York serving La Guardia Field and Newark Airport. President John F. Carey says analysis will be made of the present fare structure under current operating conditions with a view toward effecting a reduction in ground fares. Fare prospects for the entire area over the next five years also will be projected. Head of the engineering firm in this study is P. N. Simmons, formerly chief of the highway transport division of the Office of Defense Transportation. In another trouble spot—Washington, D. C.—Hervey Law, manager of National Airport, has been forced to write letters to the newspapers explaining why complicated involvement of D. C. and Virginia P. U. C. regulations prevent wide open taxi service at the airport and result in a "monopoly" contract with one limousine service. The American Legion, crying the cause of veterans who man 65% of the D. C. cabs, has sent a resolution to CAA Administrator Ted Wright demanding an end of the monopoly. It's all easier said than done, and no ideal solution is in sight. Impending use of Willow Run Airport by all airlines serving Detroit already is brewing similar dissatisfaction with ground transportation facilities. Obviously the problems of the airlines are not all concerned with in-the-air operations. Pleasing the public on the ground is an airline problem, too.

Four More Passengers: Pan American Airways engineers are happy about the results achieved through the installation of direct fuel injection engines in their Constellations. They have found that the payload capacity of the plane has been increased 900 pounds on long flights, thus allowing room for four additional passengers on the transatlantic run. They also report smoother engine operation, less vibration, and a reduction in noise—factors which contribute materially to passenger comfort. Pan Am now has Connies with this equipment in transatlantic service, and in the Pacific to Honolulu, and is adding more each week.

Post-Flight Procedure: Transcontinental & Western Air's International Division personnel are holding post-flight "briefing" sessions at Washington National Airport after each trip over the Atlantic and back. Purpose is to get personnel together while their opinions are still warm on anything which could be improved upon in either company operations or passenger service.

New La Guardia Pattern: Experiments are going forward at La Guardia Field with a new traffic pattern to relieve congestion over the field in bad weather. The range station at Clason Point is being relocated to simplify instrument letdowns and also to permit the control tower to maintain two stacks of waiting planes rather than one. Another step toward relieving New York congestion will be the opening around Nov. 1 of a new airway which will extend from Vineland, N. J., to Mitchel Field on Long Island and then to Saybrook, Conn.

Cincinnati Terminal Organization: While the Air Transport Association is reluctant to talk about the cities where it will try out the joint airport terminal corporation recommended in the McGoldrick report, one such location has been revealed by the TWA employes' house organ. TWA, Delta and American Airlines are forming a joint terminal organization to operate ground facilities when the three lines move from Cincinnati's Lunken Airport to the new Greater Cincinnati Airport across the river. Its purpose will be "to maintain and operate the terminal building and make possible the complete consolidation of all airport service functions." Real reason for ATA's desire not to talk about prospective terminal corporation locations just now is the multiplicity of local municipal factors which must be dealt with individually in each city where the plan is to be undertaken.

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AMERICAN AVIATION

American Building,

Washington 4, D. C.

and Trends

(Based on the Fortnight's Top News)

Pattern for Labor Disputes: American industry's historic pattern of labor organization (and trouble) is just beginning to emerge from the chrysalis stage in the airline industry. Pilots and maintenance men as a whole are well organized. Now Mike Quill's CIO Transport Workers Union (which includes the maintenance men) is making a drive for organization of "white collar" employes—reservation clerks, office workers, etc.—on American Airlines. This one airline, of course, is just a starter; others will follow. TWU also has set out to organize stewards and stewardesses on AA and American Overseas. In fact, it is wooing all employes except the already organized pilots. At the same time, an AFL-affiliated union, the Pursers and Stewardesses Association, is negotiating with American Overseas employes. Another organization known as the Airlines Stewardesses Association, which is non-affiliated but has the blessing and implied support of Dave Behncke, president of the Air Line Pilots Association, already has a contract with the United Air Lines and is pushing for contracts with Western and Inland Airlines. Thus the familiar pattern begins to shape up. If past history means anything, the seeds of troublesome, costly and unnecessary jurisdictional disputes are being sown now.

Mediation Board Vacancy: At least one Government official has been thoughtful enough to drop the suggestion in aviation circles that someone with understanding of air transport problems and economics should be put forward for the vacancy on the National Mediation Board caused by the resignation of Member George A. Cook. Probably the "newest" industry (outside of the atomic science field) to move into the full sweep of unionization, the air transport industry certainly needs representation and intelligent interpretation wherever Government labor policy is made. Both public interest and national defense are involved to a degree never before known.

Bad Fortune for Jets, Too: Immediately after giving the scheduled air transportation industry a spanking in an August article entitled "What's Wrong with the Airlines?", *Fortune Magazine* for September stuck its vitriolic pen a little deeper into aviation with the ironical and/or appropriate title: "Thrust." Said *Fortune*: "The U. S. position in the (jet propulsion) race is doubtful. Military secrecy still shrouds most of the area, so that it is difficult to come by a true appraisal. Enough confusion and incompetence can be seen through the haze, however, to give the nation pause. The secrecy is thickest exactly in those areas in which the U. S. is lagging, and it is lagging more or less everywhere." About that time the AAF was getting ready to turn its Republic XP-84 Thunderjet (which had clocked 619 mph at Muroc Lake, Calif.) loose on the British Gloster Meteor's official Federation Aeronautique Internationale record of 606 mph.

'No Show' Headache Improves: While airline opinion is still far from unanimous on handling of the "no show" problem and cash penalties have not yet been invoked, the CAB-approved plan requiring early notification of ticket cancellations already is paying dividends. One airline which once had as high as 17 "no shows" for one departure from Washington National Airport reports that the highest since the program was started is seven. International carriers have found the "no show" problem just as serious and costly as with the domestic airlines—if not more so. As a result, the North Atlantic Traffic Conference of IATA early in September approved a service charge of 25% with a $50 maximum, on refunds for unused tickets which are not cancelled before takeoff. This charge is to become effective 15 days after all governmental authorities concerned have approved. It is interesting to note that the Pullman Company which put a new refund policy into effect Aug. 1 reported a 32% drop in space cancellations during the first month. Full refund for reserved but unused Pullman space may be obtained only if the space is released the day before departure. Where space is released on the day of departure, or is not released, the refund depends on resale of the space. Pullman Company says that during 1945 more than 3,500,000 tickets were bought but not used.

Parker Was First: The penalty plan which the airlines have adopted to reduce no-shows was first proposed by Laigh Parker, v. p.-traffic for Delta Air Lines. He got a chilly reception at first but converts appeared one by one until industry-wide action was attained.

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Established June 1, 1937

American Aviation

Volume 10 Number 9

Commercial Traffic Congests Airports

Itinerant Aircraft Show Biggest Increase Since War

By LEONARD EISERER

UNRIVALLED congestion at the nation's major airports during the first half of this year was accomplished with fewer aircraft operations than during the same period of wartime 1945. This surprising fact is disclosed by official figures reported to the Civil Aeronautics Administration by some 110 airport traffic control towers located throughout the country.

The records show that total landings and take-offs at these fields during January-June, 1946, totaled 5,103,131, down 3% from 5,232,399 a year ago. Yet never have aviation's ground facilities been taxed as heavily as in this first postwar year. Never have congestive conditions at the big fields been so acute, as every harassed control tower operator will attest.

◆ **Belying the** bare statistics is the conversion of air traffic from mainly military to predominantly civil. Operations into and off the hundred-odd airports by Army-Navy itinerant planes dropped precipitously from 1,056,309 in the first half of 1945 to 338,706, a 68% decline. Local Army-Navy operations—by planes based on these fields—slipped even more, 76%, from 1,737,521 to 416,791.

In contrast, scheduled airline operations during the same period soared 52% from 754,310 to 1,146,092, with no sign of any early slackening. This rise is by far the most important element in current congestion at the major airports. For it is a common CAA contention that a single airline operation puts as much strain on an airport traffic control system as two itinerant operations and as much as 10 local landings and take-offs.

◆ **Effects of** extensive training programs underway are reflected in the reports which show that local civil operations climbed 81%, from 1,521,717 landings or take-offs in first half of last year to 2,766,542.

Biggest gain percentagewise, however, was registered in the itinerant civil category. First half operations in this group, which includes the vast non-scheduled traffic, totaled 435,000 or 167% more than the 162,542 of a year ago.

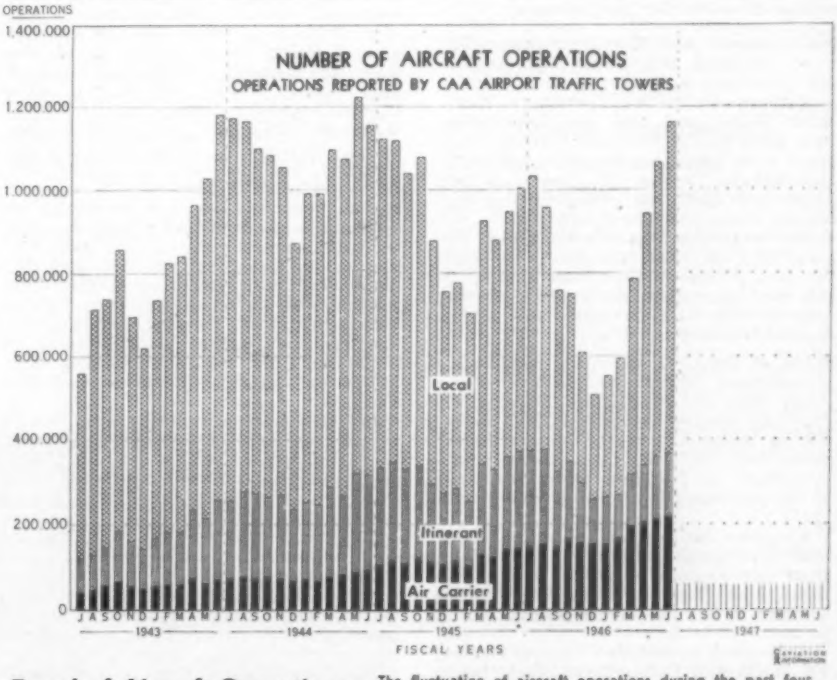
◆ **Comparison of** aircraft operations at the major airports during the first half of this year confirms La Guardia Field's position as the busiest in the country for airline traffic. As shown in the accompanying table which ranks the 25 leading airports according to number of scheduled air carrier operations handled, the New York field, with a six-month total of 69,726, was followed by Chicago with 56,119, Washington 49,504, Miami 37,644, and Burbank 36,974.

AIRCRAFT OPERATIONS AT 25 LEADING AIRPORTS
(January-June, 1946)

	Air Carrier	Itinerant Army-Navy	Itinerant Civil	Local Army-Navy	Local Civil	Total
1. La Guardia Field	69,726	3,218	8,878	2,156	11,704	95,682
2. Chicago	56,119	5,172	11,135	2,093	11,866	86,388
3. Washington	49,504	15,011	8,963	2,613	10,973	87,064
4. Miami	37,644	4,489	2,142	6,341	33,563	84,179
5. Burbank	36,974	2,199	6,791	634	6,057	52,655
6. Detroit*	.....	.....	.....	.....	.....	.....
7. Dallas	30,278	12,825	11,975	21,169	8,074	84,121
8. Pittsburgh	29,097	751	5,228	246	10,447	45,769
9. Kansas City	27,044	848	6,361	189	60,453	94,895
10. San Francisco	25,803	4,254	4,334	2,281	21,087	57,759
11. Cleveland	24,215	4,029	9,502	3,010	149,139	189,895
12. Jacksonville	23,761	4,010	2,962	561	1,452	32,746
13. St. Louis	22,385	7,332	6,143	20,680	59,683	116,223
14. Atlanta	21,265	13,161	18,998	8,494	93,159	155,077
15. Boston	21,038	1,613	5,230	268	2,090	30,239
16. Philadelphia**	.....	.....	.....	.....	.....	.....
17. Fort Worth	19,614	6,599	8,182	251	41,277	75,923
18. Newark	19,074	7,642	8,808	7,963	2,550	46,037
19. Memphis	18,639	13,540	3,981	17,517	51	53,728
20. El Paso	16,523	2,952	4,807	202	82,209	106,693
21. Nashville	16,225	8,224	4,593	3,090	1,245	33,377
22. Phoenix	15,479	4,432	6,652	98	115,510	142,171
23. Denver	15,159	95	4,095	197	68,294	87,840
24. Baltimore	14,328	1,513	4,735	526	30,423	51,525
25. Omaha	14,306	245	2,728	2	51,273	68,554

* Relative position estimated from April figures which are only ones reported to CAA during period.

** Relative position estimated from May and June figures which are only ones reported to CAA during period.



Trend of Aircraft Operations—The fluctuation of aircraft operations during the past four fiscal years is here plotted from data reported by CAA airport traffic control towers located at more than a hundred airports throughout the country. Only scheduled airline operations are included in the "Air Carrier" category, while "Itinerant" and "Local" each include Army, Navy, and non-airline civil landings and take-offs. Letters across the bottom refer to months, beginning with July.

However, 11th ranking Cleveland was tops in total operations of all aircraft with an aggregate of 189,895 landings or take-offs. Local civil operations accounted for 149,139 of the Cleveland total.

Atlanta, with 18,998, led the fields in itinerant civil operations, Dallas being second with 11,975, and Chicago third with 11,135.

Washington National Airport paced all others in itinerant military operations with 15,011, followed closely by Memphis with 13,540, and Atlanta with 13,161.

Dallas was busiest in local military traffic with 21,169 landings or take-offs.

Six-month figures for Detroit and Philadelphia are lacking, since the locally operated control towers at these places did not submit complete data to the CAA. The relative positions of these cities were estimated from April figures reported by Detroit, and May and June figures reported by Philadelphia.

Flying Mail Cars Used In Program To Boost New 5c Air Mail Rate

As a part of its campaign to promote the movement of mail by air under the new 5c-per-ounce rate, the Post Office Department sponsored three special flights in which mail actually was worked in flight while making pickup and delivery on regular airline routes.

The first flight was staged by Transcontinental & Western Air in a converted cargoliner on Sept. 25 between Washington, D. C., Dayton, O., and Chicago. The flight left Washington on regular schedule at 2:20 P.M., with postal personnel aboard to work the mail enroute.

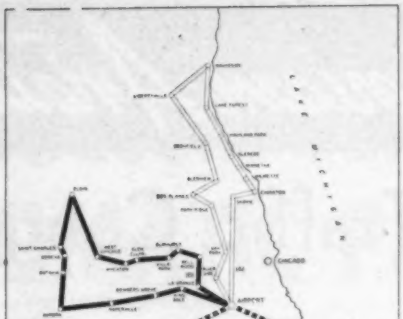
◆ **The second and third** demonstrations were scheduled for Oct. 1, with United Air Lines and American operating flying post offices. United was operating a Fairchild "flying mail car" on a run from New York to San Francisco. Intermediate stops were scheduled at Cleveland, Chicago, Omaha, Denver, Cheyenne and Salt Lake City. Mail was picked up and delivered at each of the points.

The Post Office Department manned the modified C-82 with four clerks to work the mail while in flight, the first time this has been done on a flight of this length. The aircraft was flown by a regular United crew.

◆ **Use of the C-82** was made possible by arrangement through Fairchild with the Army and the Post Office Department. The CAB granted the aircraft, still classified as military, a special air worthiness certificate. Interior of the aircraft was converted by Fairchild along the lines of its previously announced "flying mail car."

American Airlines was scheduled to operate an aerial post office on a flight from Los Angeles to Boston Oct. 1. The flight was slated to leave Los Angeles at 12:01 a. m., arriving at Boston at 9:35 p. m.

Stops enroute included Tuscon, El Paso, Ft. Worth and Dallas, Little Rock, Memphis, Nashville, Washington, D. C., Philadelphia and New York. A DC-4, equipped to work the mail in the air, was used by American.



Map Shows Route of Helicopter Mail Service.

Chicago Is Base For New Helicopter Mail Pickup Experiments

The Post Office Department on Oct. 1 began the second in its series of helicopter mail pickup and delivery experiments, this time concentrating its services in the Chicago metropolitan area. Three main routes will be operated in the 15-day experiment, which follows the same general pattern as the service tests at Los Angeles.

Five Army helicopters, manned by the same AAF personnel that participated in the Los Angeles experiments, will be used at Chicago. About 43 communities will be served. The Chicago experiments will concentrate on a "hover and run" method of mail pickup, which will eliminate the time lag required for the helicopter to land. Special pickup equipment is being used to speed up the service.

◆ **Present plans** call for the helicopter service to cover all three routes on the first day, but thereafter the service will be concentrated on the separate segments in this manner: Oct. 2-5, probably the northern route running to Waukegan, and including such stops as Lake Forest, Des Plaines and Oak Park; Oct. 7-14 probably the western route running to Elgin and Aurora, and including such stops as La Grange and West Chicago; Oct. 14-16 the southern and eastern route running to Joliet and Gary, Ind., and including stops at Chicago Heights, Hammond and East Chicago.

In addition to the three routes, which will be operated on a twice-daily basis, the Post Office Department will fly a regular shuttle service between the Chicago airport and downtown. The shuttle probably will run every half hour over a 12-hour period each day. Time for the flight is estimated at seven minutes, as compared with 55 minutes by surface transportation.

◆ **The Post Office** estimated that it could cover any one of the three main routes in two hours by helicopter. This would result in savings of from 12 to 24 hours in delivering mail to trunk-line air carriers from outlying points. All flights for mail pickup and delivery will originate at the airport.

Aviation Calendar

Oct. 1—PICAO Middle East Regional Air Navigation Meeting, Cairo, Egypt.

Oct. 1-3—ATA's Air Traffic Conference meetings, Mayo Hotel, Tulsa, Okla.

Oct. 3-5—SAE National Aeronautics (Fall) Meeting and Aircraft Engineering Display, Biltmore Hotel, Los Angeles.

Oct. 4-5—New York State Aviation Council Annual Meeting, Buffalo.

Oct. 7-8—Kansas State Airport Conference, Kansas State College, Manhattan.

Oct. 12-13—Air Show and re-dedication of Reading, Pa., airport.

Oct. 14-17—National Aviation Clinic, Oklahoma City.

Oct. 16-17—SAE National Transportation & Maintenance Meeting, Hotel Knickerbocker, Chicago.

Oct. 19-21—Third annual "Aviada," Las Vegas, Nevada, auspices Junior Chamber of Commerce.

Oct. 24-25—Institute of Navigation meeting, Statler Hotel, Washington.

Oct. 24—IAS National Air Transport meeting, Statler Hotel, Washington.

Oct. 24-26—Second annual Arizona Aviation Conference, Phoenix, auspices Chamber of Commerce.

Oct. 29—Annual meeting International Air Transport Association, Cairo.

Oct. 28-30—CAA hearing on rules and regulations for Federal aid airport program, Departmental Auditorium, Washington.

Oct. 29—PICAO Meteorological Division meetings resume, Montreal.

Oct. 30—PICAO Special Radio Technical Division convenes, Montreal.

Oct. 31-Nov. 1—CAA hearings on regulations governing use of government-owned land for airport purposes, Washington.

Nov. 1—CAA hearing on reimbursement for damages to public airports by Federal agencies, Washington

Nov. 7-8—SAE National Fuel & Lubricants Meeting, Mayo Hotel, Tulsa, Oklahoma.

Nov. 15-24—National Aircraft Show, sponsored by Aircraft Industries Association, Cleveland.

Nov. 19—PICAO Communications Division resumes, Montreal.

Nov. 20-22—National Aviation Trades Association annual convention, Cleveland.

Dec. 2-4—SAE National Air Transport Engineering Meeting, Edgewater Beach Hotel, Chicago.

Dec. 10—IATA North Atlantic Traffic Conference, New York.

Dec. 12-13—Second Annual International Aviation Celebration, El Paso, Tex., auspices Chamber of Commerce.

Dec. 17—Tenth Wright Brothers lecture, New York, auspices IAS.

Jan. 10-12, 1947—15th Annual All-American Air Maneuvers, Miami.

Jan. 6-16, 1947—Aviation of Tomorrow Exhibit, Miami.

Jan. 28-30, 1947—Fifteenth annual meeting, IAS, New York.

Feb. 1-28—Inter-American lightplane cavalcade, Brownsville, Panama.

April, 1947—National Aircraft Show, Los Angeles.

Waco Aristocraft New Type Of Unconventional Design

First Civilian Plane With Propeller Mounted In Rear

WACO Aircraft Co., entered the post-war lightplane market with a strong bid for the general utility trade. It announced that it was building for delivery in February the Aristocraft, a four-place, high-wing monoplane, featuring a pusher-type propeller in the tail and simplified controls. Price was not disclosed.

This will be the first time that simplified controls have been offered in a high wing aircraft and a plane of this size. Both Ercoupe and the Aeronca Chum, which employ a similar type control, are low-wing, two-place craft.

✦ **The Aristocraft** is powered with a 215 hp., six cylinder opposed Franklin air-cooled engine. Uniform air-cooling is assured by a blower arrangement placed immediately forward of the engine.

The power plant is rubber-mounted in the nose of the aircraft and is connected to the tail propeller through an extended drive shaft. The shaft utilizes Bendix-Weiss constant velocity universal joints in individual pressure lubricated housings.

✦ **The Aristocraft** uses a Hartzell, 84-inch propeller, which features variable pitch and is reversible for maneuvering on the ground. Waco said that the tail propeller would eliminate slip stream drag and the danger of passengers and airport personnel being struck by the blades.

The landing gear, a pre-assembled unit built by Firestone, is fully retractable, but will permit landings with brakes, even when fully retracted, without damage to the aircraft or the propeller.

✦ **The tricycle** gear features a longer wheel base due to the tail position of the propeller and mounting of the nose wheel forward of the engine. Waco said this resulted in a lower center of gravity which would permit crosswind drift landings of considerable severity.

Waco also stressed that there was no possibility of the landing gear sticking since there are no telescoping tubes, no oil compartments, no packing glands. The nose wheel is steerable on the ground, but disengages in the air to reduce control forces.

✦ **The propeller** is reversible only on the ground. The reversing control is located where it cannot be operated accidentally in the air. The propeller rotates in a plane which is 6½ degrees from vertical, thus preventing dust and stones from being thrown onto personnel or equipment.

The Aristocrat features maximum visibility in all directions. Front and rear seats are easily accessible through two wide automobile-type doors. The front seat backs are hinged as in two-door automobiles.

✦ **Another feature** is a 16 cubic foot luggage compartment with a 120-pound capacity. It is accessible from the cabin in flight and loaded through a low door when on the ground. Seats and the cabin interior have been fabric upholstered.

Aristocraft Specifications

Major specifications and performance data on the Waco Aristocraft with 215 hp Franklin engine:

Top speed, sea level, 154 mph; cruise, sea level, 135 mph; cruise, 5000 ft., 152 mph; landing and take-off speed, 65 mph; stalling speed, 55 mph; maximum rate of climb, sea level, 950 ft. per min.; service ceiling, 17,500 ft.; maximum range with 60 gals. of gas, 605 miles at sea level, 657 miles at 5000 ft.

Weights—normal gross weight, 3000 lbs.; weight empty, 2046 lbs.; normal disposable weight, 954 lbs.; maximum gross weight, 3130 lbs.; maximum disposable weight, 1084 lbs.

Dimensions—span, overall, 38 ft.; length, overall, 25 ft., 8⅜ in.; height, overall, 7 ft., 8 in.

Areas—wing area (gross), 196.64 sq. ft.; aileron area, 42.06 sq. ft.; horizontal tail area (gross), 38.41 sq ft.; stabilizer area, 22 sq. ft.; elevator area, 16.41 sq. ft.; rudder area (2), 7.5 sq. ft.; fin area (2), 7.2 sq. ft.

Loadings—wing loading, 15.25 lbs./sq. ft.; power loading, 13.95 lbs./sq. ft.

Perkins Resigns CAA

H. Harvie Perkins, former regional airport supervisor for the CAA at Atlanta, Ga., has resigned to accept a non-aviation post in private business. George Garanflo is acting as airport supervisor for District 2, pending the appointment of a successor to Perkins.

Silver Anniversary Model—The Waco Aristocraft is the first civilian plane type to employ the tail propeller which is reversible for ground maneuvering. Other features include a retractable landing gear with steerable nose wheel, unusual visibility, large baggage compartment and uni-controls. The Aristocraft is a four-place monoplane.

Four Engine Pilot Pay Increases Retroactive To Start Of Service

Twelve airlines now have adopted wage schedules for pilots of four-engine aircraft as recommended by the presidential emergency board, Executive Director C. A. Hodgins of the Airlines' Negotiating Conference, announced.

The new rates provide increases up to 36% for co-pilots in international service raise the base pay of first pilots in international service $750 a year. Provisions is made for increases in hourly and mileage pay for both domestic and international operation of faster aircraft.

✦ **The emergency** board recommendations provide a spread of from $10,981.56 annually for pilots of DC-4s on domestic runs to $12,598.56 for pilots of Constellations on international routes. In specific instances where current contract rates are in effect which provide greater remuneration than the emergency board recommendations, the higher of the two rates shall be paid.

Transcontinental & Western Air applied the new rates on Aug. 8. American Airlines and American Overseas Airlines placed the rates in effect Sept. 16.

✦ **Hodgins said** the delay by American and American Overseas and nine other airlines in placing the new rates in effect was caused by failure of the Air Line Pilots Association (AFL) to meet at the request of managements as recommended by the emergency board. However, the pay increases will be retroactive to the beginning of commercial four-engine service in each instance.

The nine airlines which adopted the wage schedules on Sept. 20 are Braniff Airways, Chicago & Southern Air Lines, Delta Air Lines, Eastern Air Lines, National Airlines, Northeast Airlines, Pennsylvania-Central Airlines, United Air Lines, and Western Air Lines.

ATA Offers Membership To New Feeder Lines

Election of five new members to the Air Transport Association was announced following the airlines organization's membership meeting Sept. 18.

Those elected to membership are all feeder airlines and include Empire Air Lines, Inc., Lewiston, Idaho; Florida Airways, Inc., Orlando, Florida; Monarch Air Lines, Inc., Denver, Colorado; Southwest Airways Co., Los Angeles, California; and E. W. Wiggins Airways Inc., Norwood, Massachusetts. The ATA action establishes a policy of admitting to membership newly certificated scheduled airlines.

To Manage Council

Marvin E. Holderness, vice president of the First National Bank of St. Louis, is slated to become manager of the Aviation Council of Metropolitan St. Louis, in October, according to an announcement by George B. Logan, president of the organization. Holderness will retire from his banking office on Jan. 1. The new manager was a member of the St. Louis aviation commission that built Lambert-St. Louis Municipal Airport.

Northrop Builds Tri-Motor For Small Field Operations

Pioneer Designed To Serve Remote Frontier Routes

By FRED HUNTER

NORTHROP Aircraft is well along in the work on the first model of the "Pioneer" and the revolutionary post-war, tri-motor "work-horse" plane is to be ready to fly in November.

The "Pioneer" is a large airplane designed for short field performance and primarily for operators in foreign countries where the routes are over rugged and isolated terrains. It also can be used, however, as a feeder-line vehicle or a short-haul airplane in sections in this country where the airfields may be small.

✦ **Under full** gross weight, which allows for 10,600 pounds useful load, the Northrop tri-motor will take off in 700 feet and will land in 750 feet. With the useful load reduced to 5,600 pounds, the ship can take off in 450 feet and land in 600 feet, it is said.

The original idea for the "Pioneer" goes back to a conversation between an airline president and LaMotte T. Cohu, chairman of the board and general manager at Northrop. The airline executive spoke of a neglected market the aircraft builders were missing—the remote frontiers in Central and South America and other countries.

✦ **"Many landing** fields in outlying and undeveloped districts of the world and even in America, are far sub-standard," said John K. Northrop, president of Northrop Aircraft. "We can't do anything to improve these fields right away but we can build airplanes to give the safest and best possible performance in them."

To obtain the agility necessary to use small fields and at the same time carry heavy loads on an economy basis, the Northrop engineers decided on a three-engine airplane powered by Wright 744C7BA1 800 horsepower engines. As an alternative, Pratt and Whitney 600 horsepower S3H1 (R-1340) engines are available at considerably lower cost.

✦ **With one** engine failing during the take-off run, the Northrop tri-motor will clear a 50 foot obstacle in 1600 feet at full gross weight. Maximum cruising speed is 185 mph at 10,000 feet with Wright engines.

The Northrop tri-motor is designed for 25,000 pounds gross weight and will carry a payload of 8500 pounds for 300 miles at an extremely low cost per ton mile. Fuel capacity is 1,000 gallons giving a 1750 mile maximum range.

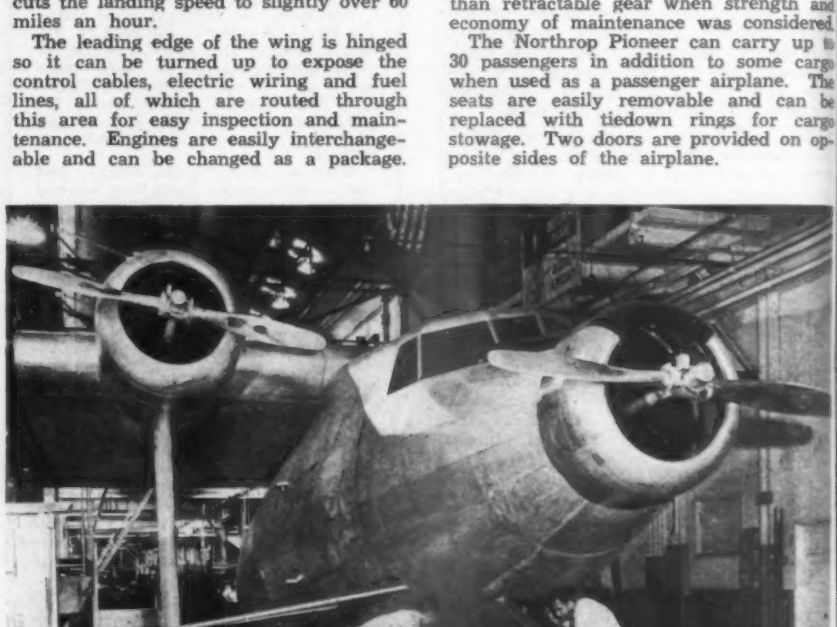
The Pioneer has a span of 85 feet and its fuselage is 60 feet 7 inches long. This makes the cabin large enough to solve the problem of carrying enough light-weight but bulky material, such as coffee, to make full payload.

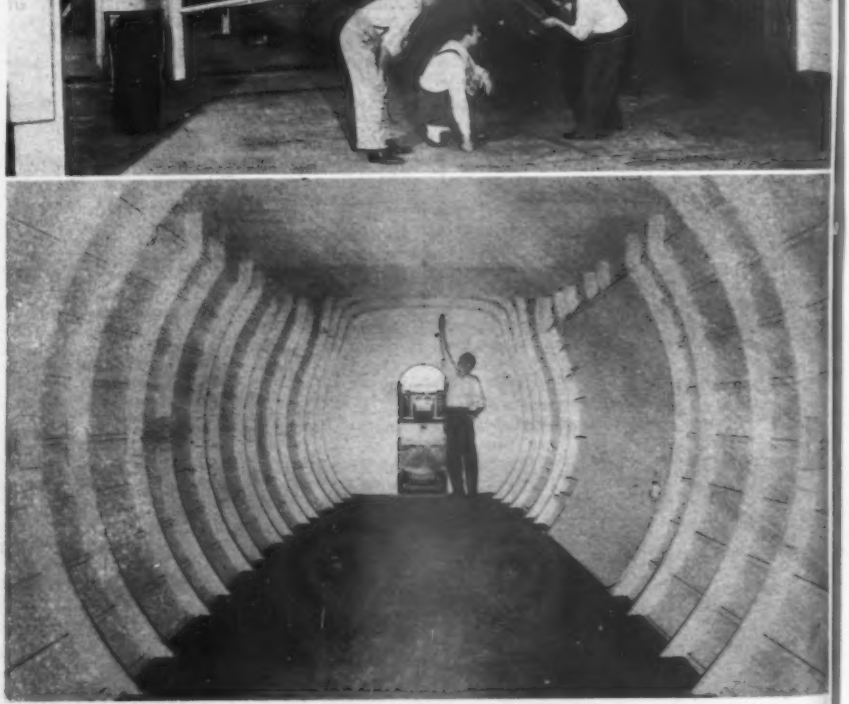
✦ **The plane** is a high-wing monoplane which lifts the wing above the dust eddies on unsurfaced fields and puts it high enough to clear fences, shrubbery and small buildings on the edges of restricted airports. The retractable ailerons, which Northrop pioneered on the Black Widow P-61, increase the controlability and safety of the Pioneer. Use of these retractable ailerons allows the use of full span flaps extending almost the full length of the ship's trailing edge and cuts the landing speed to slightly over 60 miles an hour.

The leading edge of the wing is hinged so it can be turned up to expose the control cables, electric wiring and fuel lines, all of which are routed through this area for easy inspection and maintenance. Engines are easily interchangeable and can be changed as a package. Large tires carry low inflation and an unusually long oleo strut smooths up landings on rough fields.

✦ **Landing gear** on the Pioneer is fixed. This is the result of a survey made by Northrop technicians. Riding as extra crew members on cargo hauls in South America, these technicians watched pilots jockey transport planes into and out of fields ranging from 1600 feet to about a mile in length. Hops between fields averaged 38 miles. A close survey indicated a fixed landing gear was decidedly better than retractable gear when strength and economy of maintenance was considered.

The Northrop Pioneer can carry up to 30 passengers in addition to some cargo when used as a passenger airplane. The seats are easily removable and can be replaced with tiedown rings for cargo stowage. Two doors are provided on opposite sides of the airplane.





Tri-Motor Mockup— This wooden mockup of Northrop Aircraft's new Pioneer shows the spacious fuselage of the ship which is designed to carry passengers and freight at low cost in mountainous and jungle terrain of countries where air service has been difficult. The large capacity of the fuselage enables this airplane to carry large payloads of cargo. The cabin is nearly as wide as the cabin of a four-engined airliner and is long enough to haul extended lengths of oil drill pipe and well casing. The large cargo door is shown at the right.

U. S.-British Reaffirm Bermuda Pact To Cover Bilateral Deals

Both Countries Admit Seeking Better Terms in Negotiations

By FRANK HOLZ

THE United States has reached agreements with Great Britain and Brazil which reaffirm and extend the "Bermuda principles" of freedom of airline competition, unlimited frequencies and "fill-up" Fifth Freedom traffic for through route operation. These provisions are included in the so-called Bermuda Agreements signed by the U. S. and Great Britain last February.

U. S. and Britain have pledged themselves to apply the Bermuda principles hereafter to all future bilateral air agreements with *any other nation*. This new accord was reached at a London conference last week between British officials headed by Lord Winster, Minister of Civil Aviation, and an American delegation headed by James M. Landis, chairman of the Civil Aeronautics Board.

✦ **Great Britain** pledged itself further to revise existing bilateral agreements to conform more closely with the Bermuda documents, provided only that the other nations "request" the change. It was pointed out that the document texts did not require that either signatory follow through on the same lines with other nations, but that there was an informal understanding that Bermuda would be accepted as a general pattern. Great Britain admitted that it had "strayed from the reservation," Landis said in a news conference, citing British air agreements with Greece, France, the Netherlands, Portugal and Argentina.

With regard to Greece, for example, British "pressure" resulted in exclusive rights for the Athens-London route with a 50-50 division of traffic. Greece is now expected to request the revision which Britain is pledged to give. Other nations are similarly expected to request changes in their bilateral pacts with Britain—particularly the Dutch, pioneer exponents of freedom of the air. They will not need to be "encouraged" by the U. S., Landis remarked.

✦ **CAB and** State Department officials admitted that the U. S. had also "strayed from the Bermuda reservation," but in the opposite direction. In its own bilateral agreements, the U. S. has included air freedoms beyond the pattern of Bermuda and, in some cases, has failed to include safety clauses for the protection of local traffic. In practice, the U. S. has gone after "Bermuda or better." It is now pledged to stricter adherence to the Bermuda pattern in all aviation dealings with other nations.

The two countries agreed to strive for inclusion of the Bermuda principles in a multilateral air transport agreement which is eventually to take precedence over the system of bilateral pacts. Great Britain firmly supported the U. S. in this view at the PICAO Assembly meeting in Montreal in May and June, according to Garrison Norton, chief of the State Department's Office of Transport and Communication Policy. Norton participated in negotiations at Bermuda and Montreal, as well as the recent talks in London.

A U. S.-Brazil bilateral air transport agreement signed shortly before the Anglo-British statement also represents a victory for greater freedom of the air and marks a major reversal of a South American trend toward "cartelization" and restrictions, according to Landis, who also led U. S. negotiations in this connection. Brazil first offered an agreement similar to the British-Argentine pact which contains a 50-50 quota for capacities and other formula limitations on traffic. Later Brazil adopted the U. S. view as its own. Landis states: "I am certain that this will now be the pattern of agreements that Brazil will be making with other countries."

✦ **Observers rate** the U. S.-Brazil agreement as of top importance because it is the first bilateral air pact the U. S. has signed with any South American nation and because Brazil is both an important terminal and lies "athwart" several important route, notably to Argentina and to Africa.

Brazil receives traffic entry via Puerto Rico to Miami, New Orleans, New York and Chicago. The U. S. receives substantially all the routes to Brazilian territory in the CAB's Latin American decision, plus an additional route across the middle of Brazil to Rio and Sao Paulo via Manaos on the upper Amazon River. Routes granted to U. S. airlines are summarized as follows:

1. From the U. S. via intermediate points to Manaos-Goiania-Rio de Janeiro or Sao Paulo.

2. From the U. S. via intermediate points to Belem, Natal and beyond to Africa. This route may also be flown to Europe, if North Atlantic weather conditions require rerouting.

3. From the U. S. via intermediate points to Belem-Barreiras-Rio de Janeiro-Sao Paulo-Porto Alegre and beyond.

4. From the U. S. via intermediate points to Manaos-Goiania-Guaira and beyond.

The released text of the agreement states that while the Manaos-Rio route is not ready for operation, it will be "replaced" by the route: U. S. via intermediate points on the west coast of South America to Campo Grande, Sao Paulo and Rio de Janeiro, which is the route for which Braniff Airways has been certificated. Government officials state that the Braniff route was also included in the agreement as a permanent and not a substitute route. They surmise that clerical or translation errors may be present in the released text.

✦ **Pan American** Airways will lose its existing coastal route south of Natal. However, all limitations have been lifted from the 700 mile shorter Barreiras "cut-off" route on which PAA had hitherto been limited to one round trip daily.

The U. S.-Brazil agreement, coupled with the U.S.-British extension of the Bermuda principles, greatly weakens the position of Argentina in its sponsorship of quotas and traffic limitations. If Brazil and Argentina have not yet signed a bilateral air agreement and if Brazil insists on a deal modeled after its new pact with the U. S., Argentina will either be forced to modify its position or surrender some of its ambitions for a leading position in international aviation.

✦ **Landis and** other officials are most emphatic that the U. S. will not sign any agreement with Argentina or any other country which will limit capacity and traffic to some arbitrary quota or formula. The U. S. may, however, accede to some temporary quota arrangement pending a formal agreement. In the event that Argentina will not agree to acceptable terms, the U. S. will count heavily on traditionally friendly Uruguay. Services of U. S. carriers can then terminate at Montevideo, just a short overwater hop from Buenos Aires. CAB and State Department officials decline to comment on the progress of current negotiations regarding a bilateral being carried on with an Argentine delegation in Washington.

Observers point out that the London and Rio agreements may be a wedge to reopen talks with Mexico. Negotiations for a bilateral agreement recently broke down over Mexican insistence on a quota division of traffic. Mexico's position has particularly been made more untenable because she offered the example of British agreements as an argument for her own demands.

Conference Delegates—Officials and observers of the transatlantic airlines who met in the fourth session of the North Atlantic Traffic Conference of the International Air Transport Association at Montreal, September 4-7. Seated left to right, are spokesmen for the voting members of the Conference: Gert Meidell, Norwegian Airlines; G. R. McGregor, Trans Canada Airlines; J. Stanton Robbins, American Overseas Airlines; V. E. Chenea, Pan American World Airways; Pierre Rousselle, Air France; John S. Thurman, British Overseas Airways; E. O. Cocke, Trans World Airlines; V. H. L. Dubourcq, KLM Royal Dutch Airlines; and Max Westphall, Danish Airlines. Sten Unne, assistant to the U. S. manager, SILA Swedish Airlines, standing third from right, was also a voting representative. Standing, left to right, are: Rudolph Feick, secretary of the Conference and of the IATA branch office at New York; and airline advisers Jack Lane, TCA; R. E. Deyman, TCA; P. S. Delaney, PAA; Walter Sternberg, AOA; H. M. Clarke, BOAC; J. D. Hungerford, AOA; David E. Midgely, TWA; J. R. Barch, TWA; J. W. Meijer, KLM; H. F. Good, BOAC; F. J. Martens, SABENA (observer); Harold Gyllensward, SILA; Mr. Unne; F. von Balluseck, KLM; and William Risley, AOA. John E. Slater, chairman of the board of American Overseas, who presided over the Conference, is absent from the picture.

Eastern Opens New Service to San Juan with Special Flight

Pan American Shares Space With EAL in Puerto Rico

By WAYNE W. PARRISH

EASTERN Air Lines made its inaugural flight from Miami to San Juan, Puerto Rico, on Sept. 7—and it was a humdinger. As a new route opening, it rated in the upper brackets.

Capt. Eddie V. Rickenbacker, Eastern's president, headed a party of 56 guests in a DC-4 Silverliner. On board were Edward A. Locke, Jr., special assistant to President Harry S. Truman; Rex Lee, assistant director of Territories and Island Possessions of the Department of the Interior; mayors from many points on the Eastern system, and other civic officials from the eastern part of the U. S.

✦ **All guests** on the inaugural flight flew on regular scheduled services to Miami. The flight to San Juan required about four and a half hours and all guests were put up at the Normandie Hotel which is noted for having a swimming pool in the lobby. A luncheon by the Chase National Bank opened the Puerto Rico events and the local Board of Trade and the National City Bank sponsored other affairs.

Aiding Capt. Rickenbacker was Col. M. M. "Jack" Frost, vice president and assistant to the president of Eastern, and Tom Caldwell, southern division manager. Beverly Griffith, director of public relations; Mark Nevils, director of the EAL news bureau, and Bill Wooten, director of the news bureau at Miami, were on the job and the news displays in San Juan were considerable.

✦ **Pilots for** the first flight were H. T. "Dick" Merrill and J. B. Armstrong, both vets of long standing.

Eastern immediately began a daily round-trip DC-4 service between Miami and San Juan. It is the first operation for Eastern outside the continental United States, and the first of its several new routes awarded in the Latin American decision to go into operation.

In San Juan, Eastern has opened an air-conditioned ticket office on a par with its offices in the States. In an excellent location, it began attracting attention, and business, from the first day. It is the most modern office in Puerto Rico.

✦ **The Puerto** Rican traffic service comes under Tom Caldwell, of Miami, and the operations are under Massey Brown, regional operations manager for the southern division.

Lou Sheets, well known in traffic circles and a long-time district traffic manager for Eastern in various cities, is currently supervising the Puerto Rican office but will not be based there permanently. Alberto LeBrun, who was with Pan American Airways for about 16 years, is city manager, and U. D. McDonald is station manager.

✦ **Among the** staff of about 20 which Eastern will maintain there are Rafael Carrasquillo and Frank Miranda, sales agents; Gladys Rodriquez, clerk; Germanico Vando, office manager, and Lawrence Gutierrez, express agent. Under McDonald at the airport are George Bozza and George Slindee, agents, and Robert Cons and Robert Millikan, radio operators.

Ruth Ray, Judy Cagle and Ruth Knight, all from the Eastern organization in the States, are currently in San Juan as agent trainer, counter supervisor and reservations supervisor respectively. Neal Morris, who was with the Park Lane in New York for 12 years before entering war service, and who is now assistant Supt. of passenger service, was in San Juan to get the food service arranged and to manage the banquets for the inaugural flight.

Eastern competes with Pan American's direct non-stop service San Juan-New York, and also with PAA's local service between Miami and San Juan. On a fare basis, the disadvantage is with Eastern on New York business, but there is also an indication that Eastern will be able to fill a DC-4 a day between Miami and San Juan, although business was slow at the start.

✦ **There is no** doubt that taking mayors and other civic officials to San Juan paid out in good will dividends. Puerto Rico should increase in importance as a tourist center and there is a possibility of some industry moving to the island. In addition, San Juan is becoming one of the biggest air traffic centers in the Caribbean and there is a considerable flow of business from San Juan to the numerous islands to the east and south. A U. S. territory, Puerto Rico has been largely overlooked by the American public. More air service will mean closer ties.

Passenger terminal facilities at San Juan are extremely crowded. Eastern is sharing PAA ground and radio facilities, and in turn, PAA works the Eastern communication stations along the east coast of the mainland for its non-stop flights from San Juan to New York.

Discuss New Services— Here are members of Eastern Air Lines agency department, convened at New York to discuss plans for landing of new services in the Latin-American transport field as Eastern inaugurated daily non-stop flights between Miami and San Juan, Puerto Rico. From right to left, around the table: James L. Watkins, Central Division Agency Manager, Atlanta, Ga.; DeWitt Ballew, Agency Representative, Washington, D. C.; William Westfall, Agency Representative, Chicago, Ill.; Leo J. Cafferty, Northwestern Division Agency Manager, Chicago; Gertrude M. Roche, New England Agency Manager, Boston; T. A. Sundem the company's Agency Manager, New York City; Mary Raymond, Agency Representative, New York City; T. M. Casey, Southern Division Agency Manager, Miami; Charles E. Ricker, Northern Division Agency Manager, New York City; T. J. White, Jr., Great Lakes Division Agency Manager, Detroit; and R. V. Lytle, New York District Agency Manager.

Empire And Monarch Get Underway With Feederline Operations

Empire Air Lines, Lewiston, Idaho, started the ball rolling in the newly certificated feederline category on Sept. 18, when it began service on Route 78 serving 15 cities in Idaho, Oregon and Washington.

Flights are originating at Spokane, Wash., and Idaho Falls, Ida. Intermediate stops include Pocatello, Gooding, Boise, all in Idaho; Ontario, Baker, La Grande, Pendleton, all in Oregon, and Walla Walla, Washington, Lewiston-Clarkston, Pullman-Moscow and Coeur d'Alene, Idaho. Two round trips daily are flown.

✦ **Bert Zimmerly,** president, said the service would continue to be operated with 10-passenger Boeing 247-Ds until the delivery of Boeing 417 20-passenger transports, recently ordered. A. G. Kinsman recently was named traffic manager for Empire.

In another section of the West, Monarch Air Lines of Denver began operations over a part of Route 73 on Sept. 25. Initial service was between Denver, Colorado Springs, Pueblo, Canon City, Alamosa-Monte Vista and Durango, all in Colorado. Service to Cortez, Colo., also on the route, was delayed pending airport improvements.

✦ **Route 73** also includes stops at 10 other points in Colorado and three in New Mexico. Service will be inaugurated on these segments at a later date.

Wiggins Airways of Boston and Norwood, Mass., another certificated feeder, petitioned the CAB to permit it to start operations on Route 79 between Boston and Albany, N. Y. with service suspensions at 10 certificated points. Wiggins said airport conditions at the 10 points would not now permit airline operations.

Huge Air Cargo Potential Revealed in Apparel Survey

Industry Would Ship By Air At Rates From 10 to 14 Cents

AT RATES of 10 to 14 cents per ton-mile, there is an immediate air potential of 2,809,000 to 3,511,000 pounds of women's apparel merchandise a year from metropolitan New York to the San Francisco-Oakland area, according to a report compiled by L. H. Brittin, Bertram Adult and Roger Mayhill.

The report was printed and distributed by Fairchild Aircraft under the title, "Air Potential in the New York Women's Apparel Industry." It covered the movement by air of women's apparel to both San Francisco-Oakland and to Florida.

A potential of 1,448,000 to 1,810,000 pounds a year to Florida was forecast, at rates of from 10 to 14 cents per ton-mile.

The report said that the New York-San Francisco-Oakland potential represented an average of two fully loaded C-47s (6000 pounds payload) every working day. Greatest concentration of traffic will occur in the months immediately preceding Easter and Christmas. Lightest loads can be expected in late spring and early summer.

In the Florida traffic, the potential represented one fully loaded C-47 every day, but the report cautioned that about two-thirds of this traffic will be concentrated in the four-months period from November through February.

The report stressed that service standards, especially store-door pickup and delivery and dependable adherence to schedules, are presently more important than rates in shipping high-priced merchandise by air.

"The air cargo operator cannot economically provide pickup service on an individual basis because: There are over 10,000 manufacturers of women's apparel and accessories in the New York metropolitan area. The average shipment of apparel and accessories is small, weighing less than 50 pounds.

"Joint pickup service, receiving stations and the use of freight forwarders and consolidators offer solutions to this problem. Container type equipment could facilitate mass handling of small shipments."

These were other highlights of the report:

1. A rough index of the immediate air potential in women's garments can be made by assuming that the entire upper 5% and half the medium range plus a small percentage of the low priced group will move by air. (About 35% of all apparel business falls into the high-medium price bracket, about 65% into the low price bracket.)

2. Furs and fur garments offer the best potential for movement by air, followed by dresses, which represent the largest block of air potential of any of the apparel branches. Compared with dresses, a somewhat lesser proportion of suits and coats can be expected to go by air.

The table below provides a yearly potential volume of women's apparel available for air carriage between the New York metropolitan area and the Bay area and Florida (all figures in pounds).

Type of Apparel	Flow via all Transport Media		Immediate Air Potential		Eventual Air Potential	
	Bay Area	Florida	Bay Area	Florida	Bay Area	Florida
Furs and Fur Garments	330,000	9,000	330,000	9,000	330,000	9,000
Dresses (Unit Price)	1,500,000	1,484,000	880,000	436,000	160,000	727,000
Blouses and Waists	188,000	105,000	64,000	31,000	113,000	53,000
Suits	395,000	123,000	120,000	37,000	220,000	66,000
Separate Jackets and Skirts *	406,000	142,000	80,000	30,000	160,000	52,000
Separate Coats	535,000	261,000	134,000	66,000	268,000	118,000
Beachwear and Slacks	156,000	79,000	23,000	12,000	62,000	28,000
Sweaters	589,000	303,000	118,000	61,000	236,000	106,000
Bathing Suits	55,000	44,000	11,000	8,000	22,000	16,000
Children's Dresses	263,000	87,000	66,000	17,000	105,000	27,000
Millinery	726,000	549,000	260,000	190,000	426,000	321,000
Neckwear, Scarfs, Handkerchiefs	320,000	122,000	85,000	24,000	150,000	39,000
Negligees and Robes	413,000	288,000	112,000	62,000	190,000	103,000
Gloves (Fabric)	122,000	32,000	31,000	8,000	60,000	16,000
Handbags and Small Leather Goods	1,306,000	734,000	327,000	147,000	653,000	294,000
Underwear (Woven)	1,195,000	655,000	236,000	171,000	476,000	300,000
Corsets and Brassieres	526,000	326,000	80,000	49,000	145,000	81,000
Shoes (High Priced)	150,000	90,000	150,000	90,000	150,000	90,000
Total	9,279,000	5,593,000	2,809,000	1,448,000	4,728,000	2,446,000

*Includes Work Jackets and Work Skirts.

CAA Sets Up Rules For National Airport Plan; Formulae Set

Proposed rules and regulations for the administration of the Federal Airport Act have been formulated by the Civil Aeronautics Administration. They may be seen in CAA's Regional offices. Similarly forms are now available at CAA offices for cities to use in making preliminary project requests under the Federal Airport Act.

Printed copies of the new regulations, in pamphlet form, are not yet available. Until then, cities are advised that the only other source is the Federal Register of Sept. 7 which carries the proposed rules and regulations in full.

The proposed rules and regulations state that the following types of construction work shall be eligible in a project: clearing, grubbing and grading, dredging of seaplane anchorages and channels, drainage work, on or off the site; paving of runways, taxiways, aprons and automobile parking areas within the airport site; construction, alteration and repair of seaplane ramps, docks and other seaplane base facilities, other than hangars and living quarters, access roads and walks either on or off the airport site; landscaping, seeding and sodding; fencing of airport or airport site; installation, alteration and repair of airport lighting facilities and equipment and aircraft servicing facilities, such as equipment for storing and dispensing aircraft fuel and other supplies; construction, alteration and repair of administration, terminal and service buildings and structures necessary for the proper use, operation, management and maintenance of the airport as a public facility, other than hangars and living quarters; construction, installation and connection of utilities either on or off the airport or site; removal, lowering, relocation, marking, and lighting of airport hazards and such other construction work as may be permissible under the Act and is specifically approved by the Administrator for inclusion in a particular project.

◆ **The rules** and regulations contain a formula which the CAA Administrator proposes to follow with reference to the allocation of Federal funds to Class IV and larger airports. If the allowable project costs, other than land acquisition, are less than $2,000,000, the U. S. percentage share shall be the percentage share which would apply for the development of a Class III or smaller airport. For each $1,000,000 or portion thereof over and above the $2,000,000 figure and up to $11,000,000, the U. S. share shall be 5% less. For projects over $11,000,000, the percentage of U. S. participation will remain the same as that for the $11,000,000 project. The Class IV and larger airport projects are subject to final congressional approval.

Persons desiring to file their views on the regulations have been asked to submit them to Charles B. Donaldson, Assistant Administrator of Airports, CAA. Organizations are to be heard at the Oct. 28 hearing in the following order: U. S. Conference of Mayors, American Municipal Association, National Institute of Municipal Law Officers, Council of State Governments, National Association of State Aviation Officials.

These are the nine major steps required for a sponsor to participate in the Federal Aid Airport Program:—

1. The location must be included in the then curernt National Airport Plan. This is done by CAA, after careful study of the country's aeronautical needs.

2. A sponsor (or an applicant, acting in a sponsor's behalf) must file a Project Request through CAA's District Airport Engineer, to have a given project included in the upcoming yearly Program. Use Form ACA 1623. This does not necessarily obligate CAA to so program a project. Nor is the applicant bound.

3. If a project is selected, CAA makes a Tentative Allocation, advising the sponsor or applicant on Form ACA 1641, forwarding it through the appropriate District Airport Engineer.

4. A Project Application is filed with CAA's District Airport Engineer by the sponsor or the applicant, using Form ACA 1624.

5. "Sponsor's Assurance Agreement" (Form ACA 1642) must be executed by sponsor.

6. CAA, if satisfied that all regulations have been met, approves (4).

7. Administrator then makes an Offer on Form ACA 1632 to pay US share of cost.

8. If acceptable to sponsor or applicant, a Grant Agreement (Form ACA 1642) shall be executed.

9. Sponsor then proceeds to perform all necessary construction work, adhering to CAA's standards, policies and procedures.

NATA Favors Reorganization

Members of the National Aviation Trades Association have expressed by votes already filed, that they are in favor of reorganization of the setup. Officials of the NATA have counted the ballots and announced that reorganization is practically assured.

Existing state aviation trade groups are now being asked to reorganize according to the plan announced some time ago and to affiliate with the national body. State associations are also being advised to designate a member to represent each group at the national board of state delegates, scheduled to hold its first meeting at Cleveland, November 20.

National Affairs and Congress

Trainees Find Jobs

The CAA reported that an estimated 700 of the 1000 young men trained by its inter-American Aviation Training Program now are at work in aviation enterprises in Latin America. A survey showed, CAA said, that the program had proved most valuable in the development of national civil aviation in 20 American republics.

To Address Council

Rear Admiral Luis deFlorez, deputy director of the Naval office of Research, and C. Bedell Monro, president of PCA, will be speakers at the annual meeting of the New York Aviation Council in Buffalo, Oct. 4-5. The meeting will feature special discussion groups of fixed base operators, airport managers and private fliers.

New Commissioner

Thomas B. McCabe has resigned as foreign liquidation commissioner and was succeeded by Gen. Donald H. Connolly, former commanding general of the Persian Gulf Command, who served as McCabe's assistant for some time.

AAF Journal Folds

The official service journal of the Army Air Forces, "AAF Review," formerly titled "Air Force," ceased publication with its September issue. The publication had been in existence for more than 29 years. The AAF said the action was part of an economy move.

New Missile Ships

The 45,000-ton battleship USS Kentucky and the 27,000-ton battle cruiser USS Hawaii will be the Navy's first guided missile warships. Design studies now being made for the Kentucky and the Hawaii, together with the development of missiles guided by carrier-based aircraft, will lead to a revolution in the striking power of naval warships, the Navy said.

Montgomery Memorial

Ground breaking ceremonies for a monument to be erected in honor of John J. Montgomery, who conducted glider flying experiments as far back as 1883, were staged at Otay Mesa, near San Diego, Sept. 4. The monument is to be in the form of a wing, fashioned in stainless steel.

To Test Endurance

The Navy has completed plans for construction of the world's largest human centrifuge to be used in studying reactions to forces developed in flight at supersonic speeds and in testing equipment for new high-speed aircraft and rocket projectiles. It will be located at Johnsville, Pa.

Oklahoma Air Clinic

More than 3000 invitations have been issued to representatives of all phases of the aviation industry and its related public interests to attend the fourth annual National Aviation Clinic at Oklahoma City Oct. 14-17. L. Welch Pogue, president of NAA, will preside at the opening session.

List Foreign Sales

A total of 842 airplanes (without engines) valued at $32,418,000 and 871 engines valued at $5,588,000 were exported by U. S. manufacturers during the first half of 1946, according to reports filed with the Bureau of the Census. The number of planes exported increased from 96 in January to a peak of 202 in June, while engine units increased from 59 in January to a peak of 261 in May and dropped off to 177 in June.

Named To FLC Post

Robert J. G. McClurkin has been named director of the aircraft division of the Foregin Liquidation Commissioner office of the Department of State. He will head the program disposing of surplus U. S. aircraft overseas. He was formerly with the air transport division of FEA before joining FLC as deputy director.

Utility Amphibian—Undergoing tests at the plant of Columbia Aircraft Corp., Valley Stream, L. I., is the XJL-1, designed to replace the famous Navy Duck. Power is supplied by a 1,425 h.p., radial engine and the plane is equipped with jet-assisted take off units. With a top speed of approximately 200 m.p.h., this search and rescue plane can operate from both catapult and carrier deck.

New AAF Records

Since December, 1945, the U. S. Army Air Forces have been concentrating on cutting down speed, altitude and endurance records. Last week AAF announced that it has established 22 international and six U. S. national aviation records. The record flights were made with four types of aircraft: B-29A, Lockheed P-80A, Douglas XA-26F, and Sikorsky R-5A helicopter.

Above Ceiling Pay

The Civil Aeronautics Administration paid 23 employes in violation of personnel ceilings of the Budget Bureau during the first quarter of the past fiscal year, it has been revealed in a report issued by Sen. Harry F. Byrd, (D., Va.), chairman of the joint committee on reduction of non-essential Federal expenditures. In the third quarter, the CAA technical development division averaged 2.7 persons above ceiling while, safety regulations was charged with an excess of two in February and March. The committee also found the CAB to have paid seven employes in violation of its personnel ceiling in August, 1945 and two in excess last January.

War Surplus Planes Go To Foreign Purchasers

Foreign purchasers have bought or leased a total of 4,206 surplus non-combat aircraft for $46,304,545 according to the Foreign Liquidation Commission's newly-issued "Disposal of United States Surplus Non-Combat Aircraft to Foreign Purchasers through June 30, 1946."

In addition, there is an added annual return to the U. S. from leased aircraft amounting to $4,184,714, including $2,404,333 which Great Britain paid for the use of 671 C-47's for 7,213 aircraft months, the disposal report states.

The original cost of the 4,206 aircraft was $364,311,294, comprising those declared as surplus to overseas Offices of FLC, those declared to the War Assets Administration in the U. S. and those returned from Lend-Lease by foreign governments. In substantially every country of the world where commercial airlines are operating, their equipment has been supplied partially or wholly from stocks of surplus American aircraft.

Governments and individuals of 53 foreign countries purchased or leased surplus U. S. aircraft, the report shows. The U. K. and British Nationals purchased or leased the largest number, 1,387. Others included: India, 411; France 359, Australia; 237; Czechoslovakia, 200; Philippines, 128; Holland, 125; Canada, 124, and Sweden, 11. UNRRA purchased 32 aircraft. The report lists the sales by type of plane, cost to the government and sale or lease price.

warrior born of battle

...the Curtiss BT2C carrier based torpedo-bomber

Curtiss-Wright has drawn on the battle experience of its many fighting aircraft in designing this new and powerful torpedo-bomber.

Now being flown by U. S. Navy pilots in an extensive test program, airplanes of the XBT2C-1 type incorporate major improvements on the best features of wartime carrier-based aircraft. Designed and built at the Curtiss-Wright Columbus, Ohio, plant which turned out more than 5,000 Helldiver dive bombers for the Navy, this new plane combines high performance with extreme flexibility of usage for combat service.

A Wright Cyclone R3350 engine with two-speed supercharger supplies more than 2500 horsepower and the plane carries either a torpedo or a variety of heavy bombs or large aerial rockets. Fully loaded it weighs over 18,000 pounds, has a range of nearly 1500 miles and a speed fifty miles greater than planes of similar type which saw war service.

FIRST IN FLIGHT

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PICAO Members Asked To Back Decisions With Cash

Communications And Search Planes Included As Needs

AT the closing session of the 21-nation Caribbean Regional Air Navigation of PICAO, Chairman Charles I. Stanton summarized the work of the conference and urged that all member nations implement the decisions regarding facilities and services with money and personnel as soon as possible.

The three last committees to report submitted their recommendations at the final session. The Air Traffic Control Committee recommended the standard radio beacon as the basic navigation aid for the predominating short-distance, good-weather flights in the region. For final approach and landing the Committee approved the U. S. system of runway localizer and glide path radio signals visually indicated on the aircraft instrument panel. The Committee recommended that international air traffic control centers be established at Miami, New Orleans, Havana, Kingston, Curacao, Piarco (Trinidad), Mexico City and Balboa, It was estimated that traffic density would reach 7000 flights weekly before the end of the year. In addition to the area traffic control limited to the regions of heaviest traffic, the Committee proposed "approach control" at 17 points, including Houston, Miami and New Orleans, in the U. S.

✦ **The Meteorology** Committee drew up a list of recommended reporting and observation stations. Special attention was given to the Caribbean hurricane problem, with special observation and warning procedures and greater frequency of reports during hurricane season.

The Communications Committee resolved that the forthcoming world-wide Telecommunications Conference be urged to allocate bands, rather than specific frequencies, for the exclusive use of international air services, leaving frequency allotments to PICAO. The Committee also asked PICAO to study the feasibility of "public correspondence" by passengers in flight.

Aerovias Braniff Changes Corporate Setup, Officers

Aerovias Braniff has been reorganized and "Mexicanized," reportedly as the result of a "suggestion offered" by Avila Camacho, president of Mexico. Thomas E. Braniff, founder of the company, is replaced as president by Alfonso Guzman Neira, a Mexico City attorney, with Braniff becoming one of the vice presidents. Total capitalization of the firm has been increased from one million pesos (about $200,000) to twenty million pesos (about $4,000,000), which is claimed as the largest capitalization of any airline in Mexico. A majority of the stock is to be held by Mexican citizens.

In addition to Guzman and Braniff, the officers are Gen. Elmer E. Adler, Angel Tavera and Douglas Stockdale, vice presidents; Armando Bernal Estrada, treasurer; Antonio Correa, secretary and general counsel; Adalberto Saldana Villalva, deputy officer.

Grand Opening—Visitors at Toronto's first International Air Show literally mobbed the Bristol Freighter, Britain's new aircraft making a first public appearance on this continent during an international tour. Demonstrating methods of handling freight and vehicles, the Freighter flew a new 1947 car, first to be seen in Canada, to the Air Show where the automobile was driven out the opened doors of the plane and down a ramp in less than five minutes after the aircraft taxied to a stop. The Bristol Freighter can carry vehicles with wheel loadings up to 5,000 pounds, has 2,340-cubic-foot capacity in main hold.

Biondi Assumes IATA Post In South Africa

Charles N. Biondi, of Alexandria, Va., has been named secretary of the new branch office of the International Air Transport Association at Johannesburg, Union of South Africa. He was formerly assistant to Lawrence C. Tombs, IATA Secretary. Prior to joining IATA Biondi had been an air transport officer for the Foreign Economic Administration, stationed in Brazil and India. He has also been employed by American Airlines.

Biondi

Overseas Carriers Approve Penalty For "No Shows"

Transatlantic airlines approved a service charge of 25%, with a $50 maximum, on refunds for unused tickets not cancelled before takeoff in a move to discourage "no-show" passengers. This action was taken at the most recent North Atlantic Traffic Conference of the International Air Transport Association, recently held in Montreal. The penalty rule is to become effective on North Atlantic services 15 days after all governments concerned have approved.

✦ **Other Conference** actions include preliminary approval of standard ticket and waybill forms for all companies. The airlines also adopted a standard table of Great Circle mileages between route points which will be used by all members for computing rates and tariffs. It was emphasized that in making rates, distances will be figured cumulatively from stop to stop and not on the overall Great Circle distance between terminals.

Airlines participating were: Air France, American Overseas Airlines, British Overseas Airways Corp., Danish Air Lines, Norwegian Air Lines, KLM Royal Dutch Airlines, Pan American Airways, SILA Swedish Airlines, Trans-Canada Air Lines and Transcontinental & Western Air. John E. Slater, chairman of the board of AOA, Presided.

Cuban Line Refinanced, To Gain Control of Competitor

A special meeting of stockholders of the Cuban airline Expreso Aereo Inter-Americano held in Havana Sept. 16 formally approved an increase of authorized $1 par value shares from 1,000,000 to 2,000,000 in order to purchase all of Pan American Airways' holdings in Compania Cubana de Aviacion. A purchase option agreement had been signed previously in New York by PAA and Expreso officials. As PAA holds approximately 52% of Cubana, the deal constitutes a transfer of control. Expreso and Cubana are the only scheduled airlines operating inside Cuba and both companies also operate between Havana and Miami.

British And Italians Organize New Airline

A joint British-Italian airline company is to be formed as the result of an agreement signed by the Italian Reconstruction Institute and British European Airways. Total capitalization will be 1,000,000 pounds (about $4,000,000) of which 60% is to be held by the Italians and 40% by the British.

The new organization, named Aerolinee Italiane Internazionali (AII), will be generally patterned after Linee Aeree Italiane, a company organized jointly by the Italian Government and Transcontinental & Western Air. The British undertook to organize AII after TWA opposed any British participation in LAI. An exclusivity feature in the original Italian-TWA agreement would have prevented any other non-Italian interests from participating in Italian-flag airline operations but this provision was removed at the insistence of the U. S. State Department.

The British-Italian firm plans eventually to serve points in Europe and South America, according to a report from Rome. This is the first public indication of plans to serve any area other than Europe and the Mediterranean region.

Delegates to the Italian Constituent Assembly, led by airman Umberto Nobile, have protested that the use of U. S. surplus aircraft planned by LAI and AII would injure the Italian aircraft industry.

Chennault Gets Funds For China Air Venture

Gen. Claire Chennault has organized Chennault Air Transport, with headquarters in Shanghai, to fly food, medicine and relief supplies to China's famine areas and to supplement the inadequate surface transport system.

Final authorization for creation of the airline was obtained last week from the Chinese Government, from the United Nations Relief and Rehabilitation Administration (UNRRA) and from the Chinese National Relief and Rehabilitation Administration (CNRRA). It was also reported that UNRRA would provide about $2,000,000 U. S. for the purchase of aircraft and other equipment for Chennault Air Transport and that CNRRA would have first call on the company's services. Any capacity not utilized for relief purposes may be filled by regular commercial traffic.

Promote Ground Facilities

Foreign as well as U. S. airlines are giving increasing attention to the long-neglected aspects of food and lodging for passengers at stopovers and terminal points. Ansett Transport Industries, which includes Ansett Airways, has organized Pioneer Touris Hotels Pty. Ltd., a new company which plans to build about 20 hotels throughout Australia. Officials of Pan American Airways and Pan American-Grace Airways have recently surveyed the hotel needs of cities along their routes and plan to build hotels where present facilities are inadequate. Albert Dodero, the Argentine shipping and airline magnate, is building a hotel in Montevideo and plans to build another in Buenos Aires.

FIRST ACROSS THE NORTH ATLANTIC

K.L.M., The Royal Dutch Airlines, congratulate World-Wide Aviation on the successful delivery of seven Beechcraft D18S from Wichita, Kansas, to Amsterdam, Holland.

On July 21, 1946, the first flight of three touched down at Amsterdam's Schipol airport only two days after leaving North America. On August 7 the remaining four completed successfully the historic 5,300 mile flight. World-Wide Aviation flight crews were unanimous in praising the Beechcraft for its rugged performance.

All of World-Wide Aviation crews have had an average of four years trans-Atlantic experience and are competent on four-engined aircraft.

World-Wide Aviation has established facilities in conjunction with Foreign Overseas Liquidation Commission to select, prepare and ferry to any part of the world twin and 4 engine aircraft.

World-Wide Aviation have delivered Aircraft for:

The Dutch Government.
Sabena (Belgian Air Line).
The French Air Ministry.
Iberia (Spanish Air Line).
Swissair (Switzerland).
Secretariado da Aeronautica Civil (Portuguese).
Direccao dos Servicos de Portos Caminhos de Ferro e Transportes da Colonia de Mocambique (Portuguese East Africa).
Angolian Air Lines.
Canadair Limited.
Siple Aircraft Limited

World-Wide Aviation are active in North and South American domestic ferrying of both light and medium weight aircraft.

WORLD-WIDE AVIATION AGENCIES & SALES INC.

1407 — Drummond Street

MONTREAL, CANADA

Telephone PLateau 2954
Cable Address: World Avion

United Air Lines Converts DC-4's for Freight Service

Special Equipment Affords Ease In Cargo Handling

UNITED Air Lines has placed in service a fleet of converted all-cargo carrying DC-4s featuring controlled heating and refrigeration. To speed handling of bulky articles, the aircraft carries its own portable electric winch.

The aircraft have been lined with white plastic laminated sheet Plyon with aluminum fittings. Installation of the Plyon provides air spaces 1½ inches wide and 17 inches long between the plastic lining and spun fiberglas insulation against the outside skin.

✦ These spaces, called "hot panels," create a duct for the even distribution of hot or cold throughout the entire cargo area. The air is circulated through a passage in the ceiling, and from there is shunted to the interior of the cargo compartment at a rate of 700 cubic feet per minute.

In addition, a new dry ice-methonal system provides complete refrigeration of the entire plane interior. The refrigeration equipment is located in the forward belly pit and is tied in with the plane's ventilation system. Electronic themostatic control provides even, low temperatures in flight or on the ground.

✦ When it is desired to refrigerate only a portion of the aircraft, the aft section can be closed off with a thermo-sealed curtain equipped with dry ice pockets providing refrigeration for more than 300 cubic feet of space and a 1000-pound capacity.

New Board To Review Canadian Air Licenses

The Canadian Air Transport Board will "review" all licenses for scheduled air services issued prior to September, 1944. The Board began hearings in Quebec Sept. 24 and will hold similar hearings at Kenora, Toronto, Winnipeg, Saskatoon, Edmonton, Vancouver and other cities.

The licenses to be reviewed are those issued by the Board of Transport Commissioners or the Department of Transport before the creation of the Air Transport Board in September, 1944. C. D. Howe, Minister of Reconstruction and Supply, stated that the ATB would determine whether the public interest requires a renewal of the license, changes to existing routes, establishment of new routes, or licensing of other carriers.

It is also reported that Trans-Canada Air Lines will retain its present monopoly of transcontinental and international air services under the Canadian flag. TCA officials state that the Dominion Government has no plans to alter this situation and that no such move was implied in the recent announcement by C. D. Howe of greater freedom of operation to be granted to Canadian Pacific Air Lines.

New Services

American Uses DC-4's For Mexico Service

● American Airlines inaugurated daily through service, linking Mexico City, New York and Washington, Sept. 16, using DC-4 equipment. Under the previous arrangement, passengers to Mexico City had to transfer to DC-3s at Dallas or Fort Worth. Inauguration of the through runs was made on the occasion of Mexico's Independence Day.

● Pan American Airways clipper flights between Miami and Nassau, were increased from 14 to 20 a week, Sept. 16, with new flights operating on Mondays, Thursdays and Saturdays. Flights depart Miami at 1:45 p. m. (EST) and leave Nassau at 11:50 a. m. Four engine equipment is used on the 90 minute runs.

● Northeast Airlines has inaugurated service between New York City and Providence, R. I., with five round trips on the daily schedule. The shuttle service will provide more than 100 seats daily for Rhode Island passengers.

● Air France, the French national airline, has increased its flight frequencies between New York and Paris to four times weekly. Douglas DC-4's will depart Paris on Mondays, Wednesdays, Fridays and Saturdays, arriving the following day. The westbound flights consume approximately 21 hours. New York departures are on Mondays, Wednesdays, Thursday and Saturdays. Eastbound flights via Gander and Shannon, require approximately 19 hours.

● Pan American Airways has resumed service between San Francisco and Manila. The route is later to be extended to China to complete the PAA round-the-world circuit. Fare from San Francisco to Honolulu will be $195; Midway Island, $325; Wake Island, $489; Guam, $576 and Manila, $726. Fares from Los Angeles will be the same with rates due to be scaled down later.

United's Cargoliner Features—Photo at left shows a movable electric winch (on floor) operating a cable to a hoist boom which swings out from oversize doors. The winch can be plugged into electrical outlets at several points within the aircraft for movement of articles to and from cargo pits. Also shown is a thermo-seated curtain shutting off the aft section of the plane to provide a 300-cubic-foot refrigerated section. Photo at right shows a hinged shelf in the interior of the cargo pits, which can be swung out of the way and secured to the wall.

CONTINENTAL AIR LINES

orders a fleet of 15 new Convair-240's!

CONTINENTAL AIR LINES, with its network of air routes in the heart of the West is the fourth major airline to order a fleet of America's most modern twin-engine airliner —the luxurious Convair-240.

This airline selected the Convair-240 to fill its need for an entirely new type of transport plane which would offer speed and advanced comfort features, *such as complete air conditioning*, to the air-traveling public on this airline's routes.

It was only natural that in its search for such an airliner, Continental should turn to Consolidated Vultee—the company which designed and built such famed war planes as the Liberator bomber, the Catalina, and the Coronado—the company which operated a vast transpacific airline service for the Air Transport Command during the war.

The new Convair-240 airliner will be in service by mid-'47. It will carry 40 passengers at 300 miles per hour, *plus*—with a new high standard in air-travel comfort and convenience.

Below, for example, you'll find ten of the many reasons why your first flight in the new Convair-240 will be an experience you'll want to repeat over and over again!

CONSOLIDATED VULTEE AIRCRAFT CORPORATION

San Diego, California • Downey, California • Wayne, Michigan (Stinson Division) • Fort Worth, Texas • Nashville, Tennessee

10 reasons why you'll enjoy flying in the Convair-240

1. Air-conditioned comfort!
2. 40 Passengers—at 300 M.P.H., plus!
3. Auxiliary jet exhaust thrust—for added speed!
4. Reversible-pitch propellers for smoother landings!
5. "Low level" flight comfort at high altitudes!
6. Heated wings prevent icing!
7. Lands level!
8. Full-visibility cockpit—for added safety!
9. New high-efficiency wing!
10. You relax in easy-chair comfort!

Airline Commentary

By ERIC BRAMLEY

Delta Air Lines comes through with a couple of good stories . . . One concerns the man who called up the Shreveport office and wanted to know how he could get in touch with some of Delta's pilots . . . He was told that it was impossible . . . "Well, last Thursday," he said, "we had a barge leave New Orleans loaded with some equipment that we need very much. We haven't seen or heard from the barge in eight days, and I just want to know if any of your pilots have seen my barge tied up at any landing between here and Miami. I'm just plain worried" . . . We imagine that Delta's pilots have other things to do than look for barges . . . In Delta's Atlanta office, it seems that John Porter has been having telephone trouble . . . He used to answer the phone with a "Reservations, Porter" . . . But a woman called back and said quite indignantly that she'd asked for reservations, and got a porter . . . He now says, "Reservations, Mr. Porter" . . . Then there's the story about the woman who called to check on her space to New Orleans . . . "I'm one of the wha'da you call it passengers when you wanta go and can't. What are my chances?" she asked . . . Delta says she got the seat . . .

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Passengers on American Airlines out of El Paso got quite a shock when they looked up front and saw that the captain was listed as B. B. Bruce, and the stewardess was also listed as B. B. Bruce . . . They started to wonder who was flying what, and it was finally explained to them that this was one of those coincidences . . . The captain's name was Bertrand Boyles Bruce, while the stewardess was Betty Butler Bruce . . .

•

The district traffic manager of one airline writes us that they've been plagued with the "no-show" problem for so long that they thought they'd seen everything . . . But he now has to report that they hadn't . . . It seems that the company made arrangements to fly the body of a late lamented citizen of the community to the west coast for burial . . . Came departure time, however, and the corpse failed to show up . . . This was almost the last straw, he reports . . .

•

We've heard so many terrible things about airline travel (and so many of these terrible things have been reported) that we thought we'd tell you that the airlines don't always lose reservations, kick you around, etc. . . We wanted to take a trip from Chicago to Minneapolis, and then, after a two-day stopover, proceed to Butte, Mont. . . . Three weeks before, we made reservations on Northwest Airlines through the company's Washington office . . . The space was confirmed and we told NWA that we'd pick up the tickets when we got to Chicago . . . Two days before leaving for Minneapolis we went into the Chicago terminal (remember, NWA hadn't heard anything from us for almost three weeks) and inside of 10 minutes we were checked, ticketed, and all set . . . NWA hadn't lost the reservation, hadn't misplaced it—there was no fuss, no muss . . . So you see you can venture out and travel on the airlines without getting kicked around, stabbed in the back, etc. . . . There's a good side as well as a bad side . . .

Air Mail Revenue Expected To Boom As Five-Cent Rate Goes Into Effect

THE new 5c-per-ounce domestic air mail rate became effective Oct. 1, bringing with it reductions in postage reaching as high as 94.4% between certain U. S. possessions. The reduction applies to all U. S. territory.

While the rate within the continental limits of the U. S. has been reduced from 8c to 5c an ounce, application of the new postal schedule to U. S. possessions will make it possible to send one-ounce air mail letter between the Canal Zone and Guam for 5c instead of the previous rate of 90c an ounce.

This drop, which applied in lesser degree between other U. S. possessions, was expected to increase air mail volume tremendously. Similar increases were expected within the continental U. S., where mail loads have been sagging on the domestic airlines.

An additional volume of air mail is expected to result from the fact that soldier mail abroad, previously carried at 6c a half-ounce, will be carried at the new 5c rate.

The following table shows the air mail rate in cents per ounce which were in effect prior to Oct. 1 and which gave way to the 5c rate:

	U. S.	Hawaii	Puerto Rico	Guam	Canal Zone	Alaska	Virgin Islands
U. S.	..	30	16	70	20	8	16
Hawaii	30	..	46	40	50	30	46
Puerto Rico	16	46	..	86	20	16	8
Guam	70	40	86	..	90	70	86
Canal Zone	20	50	20	90	..	20	20
Alaska	8	30	16	70	20	..	16
Virgin Islands	16	46	8	86	20	16	..

After hours, when aviation men talk shop, you'll sometimes hear them speculate as to what inventions or developments have meant the most to aviation progress. High on anybody's list should come modern high-octane gasoline . . . and the more powerful, more efficient engines that this gasoline has helped make possible. Many an increase in speed, range, payload, or ceiling has resulted from the improvement in the antiknock value of the fuels made available by oil refiners.

Ethyl Corporation

Chrysler Building,
New York City

ETHYL

Manufacturers of Ethyl fluid, used by oil companies to improve the antiknock quality of aviation and motor gasolines.

Airline Personnel

Traffic and Sales

Stern Welsh Gray

C. C. West, Jr., vice president, has announced the following appointments and transfers of personnel of Continental Air Lines: **Horace C. Gates** replaces **George D. Rash** as manager of schedules of tariffs as Rash is promoted to administrative assistant to the general sales manager. **A. J. Gilbertson** has been transferred from Tulsa traffic office to Topeka. **F. A. Lewis** has replaced **B. B. Burnham** as district traffic manager at Denver since Burnham's promotion to passenger sales manager. **E. I. Bucklin** has been transferred from Wichita to Kansas City to replace Lewis as district traffic manager. **Nat B. Gentry** moves from Oklahoma to Wichita traffic manager post. **James Hunt** of Denver replaces Gentry. **R. K. Simonson,** former assistant station manager at Oklahoma City, succeeds **Robert C. Blon,** recently resigned as city traffic manager at Lubbock. **Ridgely Mills** has moved from Denver to become traffic representative at Tulsa. **Lucy Bray,** former flight service agent, has been appointed special sales representative at Denver. **William R. Spencer** is the new publicity manager for Continental Air Lines. **Mrs. R. J. Wyckoff** has been named assistant to the director of advertising and promotion, at Denver.

William D. Weller has returned to his former post as chief reservation agent of Mid-Continent, after instructing in the training division. **Glenn M. Wilson,** former district passenger agent at Kansas City is new chief regional reservation agent. **Donald M. Patterson** has been named regional supervisor of stations. **James E. Weyhe** has left his post as station manager Sioux Falls to fill a similar position at Texarkana. **Charles H. Bollinger** has been named as instructor in the training division. **Arnold Gilbertson** is Mid-Continent's new regional supervisor of stations. **E. V. Roberts,** former Rochester station manager has assumed a similar post at Sioux City. **Wayne A. Sprague, Jr.,** new regional reservation agent, was formerly senior reservations agent for Mid-Continent, at New Orleans.

Willard F. Rand, former reservations and sales agent for American Airlines at Boston for five years, is assuming new duties as traffic manager for American Overseas Airlines at Gander.

Robert A. Green has been named district traffic manager for Western Air Lines for the state of South Dakota, with headquarters at Rapid City. He was formerly traffic office manager at Denver. Green will also serve as state chairman of the governmental affairs committee of the Air Transport association.

Walter Sternberg has joined American Overseas Airlines as director of international traffic relations. He was formerly general traffic manager for Eastern Air Lines.

Allen M. Dexter, former city ticket office manager for Eastern Air Lines at Miami, is now city manager at Providence, R. I. The new station manager at Providence is **J. L. Gralton,** formerly at Indianapolis.

Lebron Vando McNaughton

Lanier J. Bishop has been named Carolina district manager for Eastern Air Lines. Since 1937, he has served in various capacities with the company at Atlanta, Miami, and New York.

Warren Chaille is the newly appointed reservations manager for Eastern Air Lines at Jacksonville. He was formerly chief reservations agent at Miami.

R. L. Mangold, former chief of cargo sales at New York for United Air Lines has been named superintendent of freight sales. **R. C. F. Baer,** former reservations superintendent at Chicago, has been appointed special project assistant to **D. F. Magarrell,** UAL vice-president of passenger service. **David H. Robertson** and **G. S. Taylor** are the new UAL managers for the eastern and western regions, respectively.

Richard A. Ashby has been named manager of passenger service for United Air Lines at Honolulu. **Glen Evers** has been appointed chief of cargo sales for UAL at New York.

Richard B. Welsh has been named assistant to **Harold B. Miller,** vice-president of TWA in charge of public relations. Welsh was formerly public relations director for the state of Connecticut and served as Washington representative for that state since leaving the Navy.

Edward A. Stern, formerly with Pan American Airways, has been named public relations director for the New York office of Northwest Airlines.

Mrs. Emily Kincaid of Kansas City is the new traveling food supervisor for Transcontinental and Western Air. She will supervise maintenance of food standards and assist in training unit personnel for the company.

Richard N. Eckert is now serving as assistant to George F. Scott, general traffic manager for Northeast Airlines. Eckert was formerly manager of the ticket office at Boston.

Mangold Gralton Evers

Alberto Lebron, Puerto Rican travel expert, has been appointed district traffic manager for Eastern Air Lines office at San Juan. **Germanico Vando,** former business executive, is serving as traffic representative.

Frank H. Sheldon, former superintendent of Panagra mail and express is now assistant to the traffic manager of the PAA Latin-American division. He will be in charge of sales.

Henry B. McNaughton is the newly-appointed New York district sales manager for Northeast Airlines. His headquarters is at 500 Fifth Avenue.

Ashby Spencer Bishop

William T. Crasty has been named assistant legal counsel for Pennsylvania-Central. He was formerly with Naval Intelligence.

George E. Michael has been named agency and interline manager for Northwest Airlines to succeed **K. D. McKenzie,** who is now assistant to **R. O. Bullwinkle,** v.p.-traffic. Michael was formerly with TACA and Eastern Air Lines.

Junius H. Cooper, now comptroller for Hamilton Standard Propeller Division of United Aircraft, has been elected treasurer of Chicago and Southern Airlines. He will assume his new duties at Memphis, October 1.

Harold E. Gray was recently named assistant division manager, in charge of planning for the Atlantic Division of Pan American Airways. He has been division operations manager for the line since 1944.

Belgian Airline Names Representative In U. S.

Fernand J. Martens has taken up his duties as North American representative of the Belgian airline SABENA. His headquarters are temporarily at the Belgian Consulate General, 630 Fifth Ave., New York, pending the opening of a company office. Martens has been with SABENA since 1937. For two years he was manager of the airline's office in Copenhagen and later went to London. He returned to Belgium to become Assistant Commercial Manager, a post he held until he was sent to open an office in the U. S.

Martens

Ebert To Direct Foreign Personnel Work For NWA

A variety of problems which Northwest Airlines will face in hiring, training and assigning persons to jobs in foreign countries when it extends its routes to the Far East are going to be tackled by a young man who has already shown his versatility in several fields.

Appointment of Robert A. Ebert as manager of personnel in the Orient region has been announced by Linus C. Glotzbach, vice president, who is head of the airline's personnel department. It will be Ebert's responsibility to outline plans, policies and procedures for half a dozen different countries, and to administer the company's employment, labor relations and training program within the region as it affects hundreds of future employees in China, Japan, Korea, Manchuria and the Philippines.

Ebert has already begun studies of such matters as local housing accommodations, prices, schools, food, climate, customs, recreational facilities and such basic things. The studies, when they are rounded out, will cover all the areas reached by the airline's planes.

Route Extension Approved—Mid-Continent was recommended for two extensions of its Route 26, one from Kansas City to Memphis, via Springfield, Mo., and a second from Joplin via Springfield to Memphis in a report by Civil Aeronautics Board Examiner Curtis C. Henderson issued last fortnight. The report on the Kansas City-Memphis-Florida Case (Docket 1051 et al.) recommended that the applications of Braniff, Chicago and Southern and Eastern for similar services be denied, and that the application of Delta Air Lines be dismissed. Henderson suggested that Delta's proposed extension of its Route 24 to Miami be dismissed because a pending route consolidation case appeared to be a "more logical method of accomplishing the purpose sought than would be the figurative extension of route No. 24 to Miami over Route No. 54."

CECO

SERVICE

is not more than hours away! . . .

Ceco Carburetors and Fuel Pumps are in use all over the globe . . . everywhere that airplanes fly. Ocean hopping is a common occurrence for the men of the service department of Chandler-Evans who are on call day and night to give service and technical advice.

These men are highly trained technicians. Quickly and skillfully they can assist you with your problems.

They are ready to fly at a moment's notice to the most distant airport . . . the farthest outpost on the world's airways . . . to keep Ceco equipment in top-notch flying condition.

CARBURETORS FUEL PUMPS PROTEK-PLUGS

CHANDLER-EVANS CORPORATION

WEST HARTFORD 1, CONNECTICUT, U. S. A.

Transport Notes

Panagra Revenue Uptrend—Pan American-Grace Airways flew 42,847,283 passenger miles and carried 52,501 passengers and 1,571,718 pounds of mail and freight, during the first six months of 1946. The current figures reveal an increase of 14% in passenger miles flown and 21% rise in passengers carried over a corresponding period in 1945.

Change Of Address—American Airlines and American Overseas Airlines have announced a change in the address of their Washington general administrative and district sales offices. The move from the Southern Bldg., to **1437 K Street** was effective as of Sept. 23.

Use Temporary Terminal—American Airlines will conduct all of its Chicago operations from a temporary terminal building at 5036 W. 53rd Street until facilities are available in the still uncompleted new municipal passenger terminal. The temporary AA quarters were installed at a cost of $100,000 to eliminate congestion on the ramp and in the regular passenger terminal where bottlenecks had seriously impaired the airline's operations.

No Relation—Continental Air Lines claims that there has recently been considerable confusion in the airline industry and on the part of the public between the carrier company and an air travel agency known as Continental Air Travel. The airline firm desires to make it clear to all concerned that it has no relationship or association with the travel agency organization.

For Centralization—Western Air Lines has purchased a one-story building in Beverly Hills, Calif., formerly occupied by the Douglas Aircraft Co., for the purpose of uniting as many of its offices as possible, under one roof. The Defense Plant building will provide 20,000 feet of floorspace and is to be used until Western can erect a modern general office building in the Beverly Hills section. Personnel will be transferred to the new building from widely scattered offices in Hollywood, Los Angeles and Burbank.

Stewardess Class—A class of 40 young women have enrolled in the first class for stewardesses, to be conducted at American Airlines new training center at Tulsa. The school is housed in a modern hotel with classrooms and accommodations for 210 girls. The four week course which opened Sept. 16, will include training in full size mockups of the DC-3 and DC-4 types, now in use by the airline.

Claims Record—Air France, on Sept. 13, claimed a new record for speed over the New York-Paris route when Jack Fitzgerald, at the controls of a DC-4, the Comet Seine, made the run in 14 hrs., 23 mins. The previous record was 15 hrs., 32 mins., established Sept. 4 by Dana Gentry.

Heavy Cargo—American Airlines transported a shipment of steel bars from Allentown, Pa., to Portland, Me., recently, to speed the erection of the transmitter tower of a new radio station. The shipment involved 19,000 lbs. of steel, the longest units of which were 26 feet and weighing 500 lbs. each.

SPEEDBIRDS OF A FEATHER . . .

5 CONSTELLATION SPEEDBIRDS

. . . Flying between New York and London. Present schedules are being increased to provide daily flights soon.

3 BOEING (314-A) SPEEDBIRDS

. . . Operating on BOAC's luxurious, thrice weekly shuttle between Baltimore and Bermuda.

30 YORK SPEEDBIRDS

. . . Four services weekly, London-Johannesburg, London-Calcutta; twice weekly, London-Cairo.

20 HYTHE SPEEDBIRDS

. . . Three services weekly, Poole-Sydney; two weekly, Poole-Singapore.

14 SHORT ("C" CLASS) SPEEDBIRDS

. . . Two services weekly, Durban-Calcutta; once weekly, Cairo-Karachi, Cairo-Kisumu, Poole-Cairo.

20 LANCASTRIAN SPEEDBIRDS

. . . Three services weekly over the 13,000-mile Speedbird Route between London and Sydney.

10 LIBERATOR SPEEDBIRDS

. . . Two services weekly, Prestwick-Montreal, Sydney-Singapore (in cooperation with Quantas Empire Airways).

46 DAKOTA (DC-3) SPEEDBIRDS

. . . Nine services weekly, London-Cairo; three weekly, London-Lagos; one a week, London-Beirut.

19 LODESTAR SPEEDBIRDS

. . . Three services weekly, Cairo-Istanbul; twice weekly, Cairo - Nairobi, Cairo - Aden, Cairo - Basra, Cairo - Addis Ababa; once weekly, Athens - Teheran, Cairo - Pt. Sudan, Cairo-Karachi via Aden, Cairo-Athens, Lydda-Teheran.

167 SPEEDBIRDS, in all, make up the current BOAC fleet now flying regular schedules on 29 main Speedbird routes between five continents. Among these are several aircraft famous in the pioneering of many of today's principal global air arteries. In them seasoned BOAC crews have been adding to the 27 years of flying experience represented by the Speedbird emblem. This, plus new and more luxurious Speedbirds, now on assembly line and drawing board, give promise of even finer Speedbird Service in months to come.

B·O·A·C

BRITISH OVERSEAS AIRWAYS CORPORATION

SPEEDBIRD SERVICE . . . Over the Atlantic . . . and Across the World

Helicopter Mail Service Favored For Los Angeles

Postal Officials Suggest Route Systems For Area

THE Post Office Department feels that a definite public service would be rendered by helicopter airmail service in the Los Angeles area, Robert S. Burgess, superintendent of airmail service, testified before Civil Aeronautics Board Examiner Ferdinand D. Moran, at the two-day hearing held in the Federal Building in Los Angeles.

Evidence brought out at the hearing indicated that both the Post Office Department and the two applicants to provide the service, Los Angeles Airways, Inc. and Southwest Airways Co., expect passenger service by helicopter to develop quickly once an airmail service is operating on an established basis.

✦ **Burgess said** he believed the operation could be extended into a combination mail express and passenger service as helicopter equipment improves. James G. Ray, executive vice president of Southwest Airways, said he felt passengers should be carried as soon as the operation proves feasible. Clarence Belinn, president of Los Angeles Airways, said his company also looked forward to carrying passengers if it should be certificated.

The Post Office Department disclosed at the hearing that it had definite ideas of its own as to how the helicopter route should be operated and by so doing upset to some extent the calculations of the applicants. Both Los Angeles Airways and Southwest Airways based their cases on lineal routes which they had worked out as offering the most efficient service. The Post Office Department, however, presented exhibits and testimony urging that the CAB certificate the routes on a circular or radial basis. Postal Inspector Andrew E. Newton of Washington testified that he had worked out a time table to coordinate the helicopter operations with the schedules of the letter carriers in the various cities involved. For this reason, he said the department favored routes which circled out of the Los Angeles Municipal Airport with full exchange of mail, including both pickup and delivery, at each stopover. This was directly contrary to the proposals of Los Angeles Airways and Southwest Airways, both of whom based their calculations on making outbound delivery runs from the airport and inbound pickup runs.

✦ **The Post Office Department** proposed three schedules a day, morning, noon and night, on two circular routes of approximately an hour and a half duration each. It also wants shuttle flights between the airport and the rooftop of the terminal annex post office in downtown Los Angeles on an hourly basis during the daylight hours.

Because the Post Office Department completed the preparation on its circle routes only a few days prior to the Los Angeles hearing, Examiner Moran agreed to keep the record open for ten days so that the two applicants might prepare cost figures based on the Post Office routings.

CAB To Set Temporary Foreign Air Mail Rate

The Civil Aeronautics Board is expected to issue an order soon making effective the temporary mail rate of 75c per mail ton mile for TWA's European, African and Asiatic services.

At the hearing in Westington Sept. 20 on the Board's show cause order of July 15, Robert Sullivan, counsel for TWA, said his company would not interpose formal objection buts its acquiescence would have to be with the understanding that this would not prejudice TWA's moral and legal rights of a review of the rates when the permanent scale is considered, Sulliven referred to a letter which had been sent to the Board by Jack Frye, president of TWA, in which Frye expressed opinion that the temporary rate was too low and that this should be corrected in establishing a permanent rate. Frye also asked that the Board establish the permanent rate quickly so that the U. S. international air carriers would not be injured in their international operations.

Examiner Barron Fredericks stated, that in the absence of formal objection by TWA, the Board would put the new temporary rate, retroactive to Feb. 5, into effect in the near future.

Canal Zone Service Gets CAB Rehearing

The Civil Aeronautics Board has before it the record in the highly controversial Latin America case where the principal issue hinges about the possible need for additional service between the eastern seaboard of the United States and Balboa, in the Canal Zone.

The case was back before CAB because of the Board's decision to reconsider its opinion of May 17 as specifically related to the possible need for more service between the Canal Zone and eastern U. S. Eastern Air Lines took a leading role in getting the case re-opened. In the oral argument, Eastern was the target of most of the six other airline counsel who appeared to recognize Eastern as the strongest contender for the route.

✦ **Other considerations** in the proceeding hinged largely around three other cases—Pan American's application for domestic routes, the Pan Am-Panagra agreement whereby Panagra ships would operate by charter over Pan Am's proposed domestic routes and Panagra's application for a U. S. terminal.

Both Pan American and Panagra counsel argued the Board should do nothing further in this case until it has decided these other questions. Panagra held that if the Board approved the interchange agreement, the so-called need for a one carrier service between Balboa and the eastern part of the United States would be solved.

Henry J. Friendly, counsel for Pan Am, urged the Board to certificate Curacao, N.W.I. as a permanent intermediate point on PAA's Miami-La Guaira route, claiming that failure to do so would throw a large portion of business into foreign flag carrier's hands. The same thing would result, Friendly said, if PAA were prevented from serving Havana on its trans-Caribbean routes.

Harry A. Bowen, public counsel, and most of the representatives of some 20 cities urged Board approval of Eastern's application. Charleston, S. C. asked approval of Colonial's application which would enable the Board to establish a new gateway to the Caribbean area and thereby relieve congestion at the New York and Miami gateways.

Five Carriers Head For Hawaii Permits

Five carriers, including a steamship company, pleaded their cases before the Civil Aeronautics Board last fortnight asking for certification on the route between Los Angeles and Honolulu in the re-opened Hawiian case.

Leslie Craven, attorney for Hawaiian Airlines, said his company should receive the route in order that the transportation upon which Hawaii is so vitally dependent might rest in the hands of a native-owned carrier whose primary interest would be development of the Territory.

✦ **Herman Phleger,** representing Matson Navigation Co., said that 34% of the mainland-Hawaii passengers wanted combination air-surface trips and that less than half of this estimated number actually would be developed if Matson were denied a certificate.

Western Air Lines' bid for the route, voiced through Hugh Darling, attorney, was based on the fact that it is the logical carrier to compete with Pan American Airways on the Los Angeles-Honolulu run since it was in a position to deal impartially with the transcontinental carriers serving California from the east.

✦ **Pan American's Henry J. Friendly** told the Board, however, that his company should be allowed to operate the route on an exclusive basis because the certification of another carrier—particularly United Air Lines—would so dilute the traffic as to render PAA's service ineffective.

United, already certificated between San Francisco and Honolulu, asked the Board not to certificate a third carrier to compete with it and Pan American in the Hawaiian trade. Public counsel held that United was the logical carrier for the Los Angeles-Honolulu segment, with Western as the runnerup.

Accidents Decrease—A statistical analysis of non-air carrier aircraft accidents during 1944 has been prepared by the Accident Analysis Division of the Civil Aeronautics Board's Safety Bureau. The study shows that there were fewer accidents during 1944 than in 1943, despite the fact that the number of certificated pilots had grown considerably. The report, however, did note increases in the number of accidents classified as fatal and serious injury crashes and in those requiring extensive repairs to aircraft. Copies of the report are available from CAB.

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J. D. Reed Company, Houston, Texas
Southern Air Services, Memphis, Tenn.
Southern Airways Sales Co., Inc., Atlanta, Ga.
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CAB Proceedings

(A Summary of Applications Filed, and Future Actions of the Civil Aeronautics Board.)

Calendar:

Oct. 3—Prehearing conference on U. S. Lines Company's request for approval of General Traffic Agency agreement with Pan Am. (Docket 2492) 10 a. m. e.s.t. Foyer, Commerce Auditorium, Examiner Warren Baker.

Oct. 7—Hearing in the Waterman Steamship Corp., New Orleans-San Juan, P. R., Temporary Certificate Case. (Docket 2405). Examiner J. Earl Cox.

Oct. 7—Hearing on the PAA-Panagra Interchange Agreement. (Docket 2423). 10 a. m. e.s.t., Conference Room A Departmental Auditorium. Examiners Thomas L. Wrenn and Warren E Baker.

Oct. 7—Prehearing conference on Colonial's show cause order affecting service to Glen Falls, N. Y. (Docket 2487) 10 a.m. e.s.t. Foyer, Commerce Auditorium. Examiner Frank A. Law jr.

Oct. 8—Rebuttal exhibits in the Detroit-Washington Service Case due. (Docket 679 et al.) Postponed from Sept. 15.

Oct. 9—Prehearing conference involving proposed service in the Florida area. (Docket 997 et al.) 2 p. m. e.s.t. Foyer, Commerce Auditorium. Examiner F. M. Ruhlen.

Oct. 10—Prehearing conference on application of National to include Key West on its Tampa/Miami-Havana route. (Docket 2356) 10 a. m. e.s.t. Foyer, Commerce Auditorium, Examiner F. M. Ruhlen.

Oct. 14—Rebuttal exhibits in the Pan American Airways Domestic Routes Case due. (Docket 1803).

Oct. 14—Briefs in the Cincinnati-New York Case due (Docket 221 et al.) Postponed from Sept. 20.

Oct. 15—Hearing in the Detroit-Washington Service Case. (Docket 679 et al.) Postponed from Sept. 23. Examiner Edward T. Stodola.

Oct. 19—Rebuttal exhibits in the Air Freight Case due. (Docket 810 et al.) Postponed from Oct. 14.

Oct. 21—Rebuttal exhibits due on application of Continental Air Lines for permanent Certification of its Hobbs, N. M.-San Antonio, Tex. Route. (Docket 2087).

Oct. 21—Rebuttal exhibits in Continental Air Lines' San Antonio-Hobbs Certificate Case due. (Docket 2087).

Oct. 28—Briefs due in the Arizona-New Mexico Case. (Docket 968 et al.).

Oct. 28—Hearing on application of Continental Air Lines for permanent certification of its Hobbs, N. M.-San Antonio, Tex., routes. (Docket 2087). Examiner Frank A. Law, Jr.

Nov. 12—Hearing in the Air Freight Case. (Docket 810 et al.) Examiners R. Vernon Radcliffe and William F. Cusick. Postponed from Oct. 28.

Nov. 15—Date for exchange of exhibits in the Freight Forwarder Case. (Docket 681 et al.)

Dec. 20—Deadline for rebuttal exhibits in the Freight Forwarder Case. (Docket 681 et al.)

Jan. 10, 1947—Hearing in the Freight Forwarder Case. (Docket 681 et al.) Examiner J. Earl Cox.

Applications:

Air Dispatch, Inc., 1015 Union Central Bld'g, Cincinnati for a certificate, or exemption order, authorizing applicant to engage as a freight forwarder over scheduled and non-scheduled lines. (Docket 2493)

Air Pick-Up Lines, Inc., Los Angeles Municipal Airport, Los Angeles for permanent or temporary certificate authorizing scheduled air transportation of persons, property and mail by conventional and helicopter type aircraft between Los Angeles and Reno, via various intermediate points. (Docket 2499)

All American Aviation, Inc. and A. Felix Du Pont, Jr. for approval of interlocking relationship. (Docket 2497)

Vernon E. Anderson, 2135 Sidney Street, St. Louis, Mo., and Joseph C. Michaelree, 2019a Eads Avenue, St. Louis, Mo., and William Engel, Route 6, Box 1212, Sappington, Mo., for a permanent certificate authorizing scheduled mail and property service over an 880-mile route between St. Louis and New York. (Docket 2490).

Brayton Flying Service, Inc., Lambert-St. Louis Municipal Airport, St. Louis for certificate authorizing non-scheduled air transportation of persons and property between points and places in the U. S. (Docket 2498)

Compania Mexicana de Aviacion, S. A., 21 Bolivar, Mexico City for foreign air carrier permit authorizing scheduled or non-scheduled air transportation of persons, property and mail between Mexico City and New Orleans. (Docket 2500)

Laurence S. Conner, P. O. Box 906, Casper, Wyo., for a permanent or temporary certificate authorizing scheduled mail, passenger and property service over a 1092-mile route between Bismarck, N. D., and Phoenix, Ariz., and over a 1586-mile route between Kansas City, Mo., and Portland, Ore., both via various intermediate points. (Docket 2491)

Eastern Air Lines, Inc. for amendment of its permanent certificate for Route 6 or any route it is granted in the Latin American proceeding, so as to include Montego Bay, Jamaica as either a terminal or intermediate point thereon. (Docket 2501)

Lifschultz Air Freight, 173 West Madison St., Chicago for certificate authorizing air transportation as a freight forwarder over the lines of non-scheduled air carriers between points in all states of the U. S. (Docket 2503)

Merchants Air Express, Inc., 1858 S. Western Ave., Chicago for certificate as freight forwarder over domestic scheduled and non-scheduled lines. (Dockets 2506 and 2507)

Pacific Air Transport, Redding Municipal Airport, Redding, Calif. for permanent or temporary certificate authorizing scheduled air transportation of persons, property and mail between Redding and San Francisco, via Sacramento. (Docket 2502)

Pennsylvania Air Freight Co., Inc., 18 S. 15th St., Philadelphia for a certificate authorizing air transportation as a freight forwarder over the lines of scheduled and non-scheduled air carriers between all points in U: S. (Dockets 2504 and 2505)

Railway Express Agency, Inc., 230 Park Avenue, New York and Fannin W. Charske and Edward G. Smith for approval of interlocking relationship. (Dockets 2495 and 2496)

Trans-Caribbean Air Lines, August G. Liebmann, et al, Box 469, Benjamin Franklin Station, Washington, D. C. for permanent or temporary certificate to transport by air, freight only, between Houston, Texas and Maracaibo, Venezuela, via various intermediate points. (Docket 2494)

Wien Alaska Airlines, Inc., for a permanent and/or temporary certificate authorizing mail, passenger and property service between Fairbanks, Alaska, and the co-terminals Chicago-Minneapolis-St. Paul, via White Horse, Yukon Territory, and Edmonton, Alberta, for refuelling and customs clearance only. (Docket 2478).

Karl Pannacl, 131 Prospect Avenue, Gloversville, N. Y., for a permanent or temporary certificate authorizing scheduled passenger and property service over a 158-mile route between Johnstown, N. Y., and Teterboro, N. J., and/or Flushing, L. I., N. Y. (Docket 2450).

Pennsylvania-Central Airlines Corporation, for an exemption order authorizing non-stop service between Washington and Chicago pending decision in Docket 932 et al. (Docket 2446).

Safeway Airways, Box 654, Seward, Alaska, for a permanent or temporary certificate and/or exemption order authorizing non-scheduled passenger and property service to all points within a 200-mile radius of Seward, and charter trips between all points in the Territory, including Valdez and Cordova in the east, Kodiak Island on the south, and Homer and other points along Cook's Inlet. (Docket 2397).

Standard Airlines, Inc., Administration Building, Long Beach Municipal Airport, Long Beach, Calif., for a permanent or temporary certificate authorizing scheduled mail and property service between Long Beach/Los Angeles and Boston; San Diego and Seattle; Kansas City and Brownsville; and property service in the Southern California area; Middle West Area; Eastern Area; Northern California Area; Northwestern Area; and the Texas Area. (Docket 2458).

Sun Transporters, Inc., Empire State Building, 33rd and Fifth Avenue, New York, N. Y., for a permanent or temporary certificate authorizing non-scheduled air transportation of property as a freight forwarder or consolidator. (Docket 2475).

Transcontinental & Western Air, Inc., for a change of Approved Service Plan—Foreign Air Transportation, to include a stop at Dublin, Eire, as an intermediate point between Foynes and Paris. (Docket 2449).

Universal Airline, Inc., Box 364, Miami Springs, Fla., for a permanent and/or temporary certificate authorizing scheduled passenger and property service over 2990 miles of routes between Miami and New York, Miami and Chicago and between New York and Chicago. (Docket 2445).

SUMMARY OF U. S. DOMESTIC AIR TRANSPORT OPERATIONS FOR SIX MONTHS ENDING JUNE 30, 1945

Compiled by AMERICAN AVIATION Publications from official C.A.B. Data

TRAFFIC STATISTICS

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor	Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane-Miles	Scheduled Miles	% Scheduled Miles Completed	Total Planes*
All American	.....	.....	.....	....	17,925	4,219	.....	22,147	100,729	22.0%	838,833	907,712	92.4%	13
American	995,182	538,286,195	623,705,842	86.4%	3,571,809	1,967,316	1,627,714	60,832,641	83,684,820	74.5%	28,505,998	28,450,499	96.9%	144
Braniff	225,549	93,102,675	107,713,016	86.4%	350,198	236,625	87,525	10,069,589	11,530,606	88.5%	5,216,830	5,103,400	98.2%	28
Caribbean	21,694	1,290,720	2,561,465	50.4%	1,236	2,063	1,153	106,596	271,226	42.2%	227,246	180,737	89.3%	3
C & S	154,316	62,952,135	79,303,252	79.4%	177,318	193,409	.....	8,723,228	8,665,240	78.3%	3,704,958	3,857,917	95.4%	19
Colonial	66,030	19,853,954	27,879,024	71.2%	47,497	25,250	.....	2,080,317	2,839,737	74.1%	1,447,121	1,463,995	89.7%	17
Continental	92,794	34,156,088	51,503,484	66.3%	70,716	28,880	10,752	3,552,771	5,800,246	65.1%	2,477,878	2,508,491	98.5%	14
Delta	216,975	91,326,279	116,018,735	78.6%	408,782	213,046	.....	9,572,274	15,649,354	66.0%	4,613,987	4,917,823	97.7%	23
Eastern	659,410	343,707,774	398,829,043	85.9%	1,660,022	1,380,100	113,198	37,982,373	48,093,728	90.0%	18,418,498	17,671,834	96.8%	78
Hawaiian	106,940	15,318,581	16,957,887	90.3%	12,857	52,283	143,897	1,572,161	2,145,831	73.7%	796,044	583,376	98.3%	7
Inland	37,009	10,109,688	16,437,598	61.5%	24,560	7,386	11	1,049,676	1,715,190	62.8%	983,762	1,002,268	98.8%	11
MCA	115,344	35,037,184	45,800,325	77.0%	107,601	62,641	.....	3,871,609	5,012,212	79.1%	2,367,578	2,436,162	96.9%	10
National	123,096	72,989,418	86,269,253	84.6%	324,152	115,942	.....	7,936,617	12,853,662	62.5%	4,116,530	4,261,840	93.5%	17
Northeast	164,648	33,578,690	45,856,952	73.7%	38,198	27,982	.....	2,916,399	4,521,778	66.1%	1,652,339	1,921,944	84.8%	11
Northwest	261,228	159,589,157	182,333,141	87.5%	970,748	463,458	.....	17,014,973	21,255,609	81.1%	8,343,981	8,470,721	95.9%	33
PCA	569,647	166,208,716	214,148,381	77.6%	348,424	473,425	.....	15,856,644	23,747,673	67.6%	8,126,309	8,612,694	93.2%	51
Pioneer (Essair)	8,050	2,368,639	3,936,654	60.2%	10,423	2,430	.....	225,214	393,936	59.8%	437,406	494,492	88.3%	9
TWA	448,078	394,710,858	456,258,349	86.5%	4,183,247	1,983,571	784,763	45,979,219	62,542,902	76.6%	21,048,831	20,410,534	95.0%	89
United	760,188	457,374,197	529,342,351	86.4%	5,197,616	2,169,688	1,216,062	52,687,739	76,138,311	70.5%	29,820,218	25,995,820	95.3%	108
Western	200,913	76,320,610	98,268,208	77.7%	284,968	150,486	37,223	8,188,021	11,361,257	71.9%	3,868,001	3,859,238	99.1%	23
TOTALS	5,227,051	2,807,131,508	3,101,513,970	84.9%	17,828,279	9,440,301	4,032,297	288,213,186	398,524,136	74.1%	147,209,353	143,091,294	95.9%	622

* As of June 30, 1945


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Non-Scheduled Carrier Offers Caribbean Air Tours

Recreational Opportunities On List Of Attractions

AMERICAN Air Export-Import Co., non-scheduled carrier, on Sept. 28 inaugurated the first of a series of package air tours to the Caribbean area—Puerto Rico, Cuba and the Virgin Islands.

Charles A. Carroll

The first trip, originating at New York, covered a nine-day, all-expense stay in Havana for the all-inclusive fare of $185 plus tax. Guests were housed at Hotel National on the European plan.

A similar tour to Puerto Rico will sell for well under $200. Recreational opportunities offered include motor rides around the islands, swimming, beach parties and other planned activities.

AAXICO has been in non-scheduled operations for a year. It began with a single DC-3 and now has seven in its fleet, with two more on order. It has carried 20,000 pessengers 19,000,000 passenger miles and showed a profit of $57,000.

The company has bases in New York, Atlantic City, Miami, San Juan and Havana. Personnel totals 180, including 25 pilots and 23 hostesses. Seventy-five percent are veterans.

Heading the company is Charles A. Carroll, president. His brother, Thomas J. Carroll is vice president and manager of the New York office. Other officers are Howard J. Korth, vice president and general manager; William J. Korth, treasurer; J. Seymour Kail, vice president-operations and traffic, and Glen H. McNew, secretary.

Independents Raise Question on Freight

In a petition which raised the question of the right of present major airlines to carry freight under their existing certificates, the Independent Air-freight Association, Inc., seeks leave to intervene in hearings before CAB on applications for certificates of contract airlines, H. Struve Hensel, counsel for the Association announced today.

Asserting that certificates now held by the major airlines permit carriage of "passengers, mail and property," the Association asks for an interpretation of the meaning of the word "property" in the light of conditions at the time the certificates were granted, Hensel stated.

"The association desires to present argument with respect to the extent to which certificates previously granted for the carriage of 'property' at a time when the present carriage of bulk airfreight was not contemplated should be interpreted to cover bulk freight.

The five airfreight lines which are members of the association are: The Flying Tiger Line, Slick Airways, Inc., U. S. Airlines, Inc., Willis Air Service, Inc. and Flamingo Air Service, Inc.

Also the association desires to be heard on whether the certificates to be granted as the result of the proceedings will be permanent or temporary.

These were other developments among non-scheduled carriers:

Air Cargo Transport Corp., helped beat the truck strike and meat shortage on Sept. 11, by delivering five tons of smoked meats from Cleveland to Teterboro airport, for delivery in time to open a new market at Hackensack, N. J. A DC-3 of the ATC fleet was called into service a few hours before the store was scheduled to open, after other means of transportation were unavailable.

Willis Air Service, Inc., has taken delivery on a reconverted DC-4 to add to its present fleet of DC-3's and DC-4's already engaged in non-scheduled operations. The new addition to the fleet will go into service between the Willis base at Teterboro airport, N. J., and Puerto Rico and in coast-to-coast cargo operations. Willis has also recently placed orders for six Martin 202s.

National Skyway Freight has named Al Newman as district manager of the lines new Seattle office. He was formerly traffic representative at New York.

U. S. Airlines claims to have moved the largest consignment of pianos ever shipped by air, when 36 of the musical instruments, weighing a total of seven tons, were transported from Southwest Airport, Philadelphia to Oakland, Calif., and Miami, Fla. The shipper was the Lester Piano Manufacturing Co.

Empire Airlines, Inc., was reported on Sept. 13, to have elected Elliott Roosevelt to the office of president of that company. Dean Alfange, former president and founder of the organization, becomes chairman of the board and general counsel in the new setup, it was announced.

U. S. Airlines claims the distinction of having moved the first complete household from the east to west coasts. All of the furnishings of a five room Philadelphia home, owned by Mr. and Mrs. John Hackett, were tranported to San Francisco, in 18 hours, in a C-47, operated by the charter carriers.

Transair, Inc., of New York has assigned one of its DC-3's to the transportation of Bob Crosby's orchestra, on a five day transcontinental barnstorming tour. Only by the use of air transportation could the band fulfill engagements in the widely-separated cities, in the limited period.

Hoosier Air Freight Corp., has announced the changing of it's name to **Airborne Cargo Lines**, effective immediately. The company operates a fleet of 10 DC-3's and has an application pending before the CAB for certification as a scheduled freight carrier.

The Flying Tiger Line has recently transported a huge shell and tube brine cooler, 18 feet long and weighing more than three tons, from Newark airport to the El Modena Citrus, Inc., plant, Orange, California. Air freight shipment reduced delivery time by 10 days over other available methods and permitted citrus fruit growers to put the machine into service in time to save untold quantities of perishables. A recent eastbound load, carried by the same line, included a shipment of delicate radio precision instruments.

Minnesota Spends $279,110 For Airport Development

New Contracts for $768,740 To Affect 15 Communities

AS of Sept. 1, ten Minnesota communities had completed construction projects valued at $279,110 under the state airport development program, the department of aeronautics said in a progress report.

Contracts for an additional $768,740 have been awarded, calling for various types of airport construction at 15 other communities. Some of this work is 90% completed. It includes grading and draining, clearing, lights, water and sewage installations as well as runway and taxiway construction.

✦ **An additional** $310,750 worth of airport construction in 19 communities is contemplated this year. Bids on the bulk of it were to be let this fall.

The aeronautics department said that while $2,000,000 was authorized to be expended—under certificates of indebtedness—for the state airport development program, only roughly half of this amount has been used due to lack of readiness on the part of the municipalities to proceed.

The Minnesota program contemplated a 50-50 split between state and municipal funds. Credit for work previously accomplished by the municipality, plus adjustments where the municipality was unable to carry its full share of the load, resulted in substantially greater contributions on the part of the state, the report stated.

✦ **With the** availability of federal funds under the national airport act, it is contemplated that the financing of airport development will be one-fourth municipal, one-fourth state and one-half federal for planning and construction. For land acquisition, the split will be one-fourth federal, one-fourth state and one-half municipal.

St. Paul Commission Asks Supreme Court For Airport Decision

The Minneapolis-St. Paul Metropolitan Airports Commission is appealing to the Minnesota Supreme Court a decision of Judge Carlton McNally of District Court which held in effect that the Commission did not have the power to close an existing airport without condemning the property and purchasing it, and which also cast some doubt on the legality of the Commission's rule that airports under its jurisdiction must be located certain minimum distances from each other.

The case arose from the application of the operators of Cedar Airport to the State Aeronautics Commission for a license to run the field as a contact public airport. Cedar was established as an airport in 1938 and had received licenses from the state commission in 1941 and 1942, following which the field was leased to the Navy. In 1944 the operators reapplied for a license, and the case was referred by the state commission to the Metropolitan Airports Commission, which has jurisdiction over all fields within 25 miles of the Twin Cities.

✦ **Because Cedar** is 3.5 miles from the center of Wold-Chamberlain Field, the Twin Cities' airline airport, MAC refused to approve issuance of a license on the grounds that the small field would constitute a hazard. MAC also has a rule stating that an instrument airport must be at least eight miles away from the center of the nearest licensed instrument airport, and 5½ miles away from the nearest contact airport. Contact airports must be three miles apart and such a field must be 5½ miles from an instrument field.

"If the Commission (MAC) considers that public safety requires that this potential hazard be eliminated, then the Commission may take appropriate steps under the Airport Zoning Act to remedy that situation," Judge McNally said. The Airport Zoning Act provides the proper procedure for eliminating such a hazard if it does exist. Under that Act, the Commission must pay compensation if it wishes to prohibit the continued use of relator's land for airport purposes.

✦ **"In arriving** at this decision, the Court has concluded that the approval power given to the . . . Commission is regulatory in nature and can be exercised only to enforce compliance with regulations adopted by the . . . Commission; it cannot be exercised to prohibit issuance of a license by the State Commissioner on the grounds here involved.

"The Legislature has given the State Commissioner of Aeronautics the sole power to license airports and to pass upon the propriety of their location. The approval power does not authorize the . . . Commission to deny approval of a license because it deems the location hazardous; that is a matter that the State Commissioner alone must determine in passing upon the license application."

MAC has claimed that it has the power, in the interests of safety, to deny an operator the use of a field as an airport. It has also maintained that the zoning act is a protection only against erection of obstructions and would not make possible closing of a field for safety reasons. When Wold-Chamberlain is expanded, Cedar will be only one mile from its boundary, MAC officials state.

Airport Development Booms In Indiana

As of June 30, Indiana had a total of 175 civil airfields and approximately 30 additional airports in various stages of development, the state aeronautics commission said in its first annual report. This compared with 54 airports in the state in 1944.

The commission said that it had completed airport site surveys at 20 municipalities, and had approved five. Approval is based on three factors: (1) economic need for an airport; (2) adequacy of the proposed site, and (3) adequacy of plans for the proposed airport development program.

✦ **Under its air** marking program, which requires that all communities of 500 or more population be adequately marked, the commission reported that 40 municipalities had been marked. The state has 390 municipalities to be marked under the program.

In its legislative recommendations, the commission asked that the law which provides for refunds of state tax on motor fuel delivered into the fuel supply tank of aircraft be amended to relieve fliers, airport operations and the administrator of a burdensome procedure which apparently serves no useful purpose.

McGoldrick Plan To Be Tested At Willow Run

The Board of Directors of the Air Transport Association voted on Sept. 18 to form an Airline Terminal Corporation for the purpose of experimenting, at a few selected airports, with the McGoldrick plan for a consolidation of airport services.

ATA directors did not announce the cities which had been selected for these experiments but it is believed that the first major test will be at Willow Run, near Detroit.

✦ **The seven** airlines serving the Detroit area—United, American, TWA, PCA, C & S, Northwest and Eastern—recently agreed to move all operations to Willow Run. Another of the experiments may be conducted at the new Covington, Ky. airport which is to serve the Cincinnati area.

The new terminal corporation will be formed by ATA. It will have its own Board of Directors, yet to be chosen. They will be empowered to make the decision as to where the new plan is to be given its first trial.

● A $275,000 development and beautification program at Hoosier-Parks airport, Indianapolis, has been announced by Oliver L. Parks, following the acquisition of an adjoining 18.8 acre tract, to be added to the present layout. Grading, landscaping and the erection of 196 individual T-type storage hangars will be included in the expansion program. A total of $10,000 has been spent recently on the improvement of the field runways, Parks said.

Pennsylvania Plans To Spend $50,000,000 For Airport Development

More than $50,000,000 is destined to be invested in the airport improvement and development program, planned for the next ten years by the State Aeronautical Commission of Pennsylvania. This is based on the expectation that the Keystone state will receive $20,000,000 in Federal funds, during the period under consideration.

The commission has reported a current appropriation of $2,725,000 in federal funds which are to be matched with funds supplied by the various municipalities to be served. Bond issues, totaling $15,000,000 in Philadelphia and $10,000,000 in Pittsburgh have already been voted for the development of huge international airports, it has been announced at Harrisburg.

New Aviation Council Set Up At Newark

The Chamber of Commerce for the City of Newark, N. J., has formed a new trade section of the organization to be known as the aviation council. At the first meeting of the group, the following officers were elected: Alex G. Harris, Eastern Air Lines, Chairman; James A. Wooten, United Air Lines, Vice-Chairman; Raoul H. Nehr, American Airlines; Edward J. Siefreid, PCA and Harvey G. Stevenson, Veterans' Air Lines, members of the board.

Newark's aviation council was formed at the instance of the chamber members engaged in air transportation. The group will cooperate with municipal and national interests on common problems of the aviation industry.

Gridiron Pays Dividends At Reading Airport

Melvin H. Nuss has found a new way to exact non-aviation revenue from airport visitors at Reading, Pa. The airport manager recently discovered that a local semi-professional football team was in need of a home gridiron. Nuss consulted with the manager of the team and then with the city airport commission.

The result was a full size football field, laid out at the north side of Reading airport, parallel to a banked terrace that provides seating accommodations for the large crowds of enthusiasts. The football club paid Nuss for the preparation and policing of the field and turns over 15% of the net gross, after every game.

● The International airport at Gander, Newfoundland has been officially opened for transatlantic operations. The base, started in 1938 was a joint project of the British Air Ministry and the government of Newfoundland and was a main jumping off place for planes ferried to Europe. Various U. S. and other airlines have cooperated in improving the airport to be used by Air France, American Overseas, BOAC, KLM, Pan American, Scandinavian, TCA and TWA. Gander now provides facilities for quartering the staffs of the various lines as well as hotel accommodations for 200 persons and emergency accommodations for 100 more.

Flight Training Programs Impaired By Faulty Engines

Continental Conversion Kits Available To Operators

HUNDREDS of lightplanes were reported temporarily grounded during the latter half of September as a Civil Aeronautics Administration safety order directing changes in more than 6,500 Continental engines began taking serious effect.

The CAA directive issued in August required replacement of piston pins or reworking of the pistons in certain engines already in use "not later than 50 hours of engine operation after Aug. 27, 1946." Hardest hit, perhaps, were flight training operators who were unable to make the required modifications before expiration of the 50-hour period allowed. According to the Aircraft Owners & Pilots Association, time for many operators participating in the G. I. training program began running out toward the middle of last month.

✦ **Affected by** the CAA action were airplanes with (1) Continental A-65 series engines with serial number in range from 3456658 to 4109568 inclusive, and (2) Continental A-65, -75, or -80 series engines which have had A-21422 piston pin or new three-ring pistons installed since Sept. 25, 1945. Information from Continental Motors Corp. indicated that the 6,529 engines of the A-65 type involved were manufactured between Sept. 25, 1945, and March 25, 1946.

In its "mandatory note" to aircraft owners, CAA explained that "A certain percentage of piston pins installed in engines of the above number and distributed as replacement parts are subject to failure without warning. The weakness of these pins cannot be detected by normal inspection methods. Piston pin breakage can result in complete engine failure."

✦ **CAA asserted** it was the owner's responsibility to avoid this risk of engine failure by: (a) replacing the piston pin part No. A-21422 (.626 inch inside diameter) with thick wall piston pin No. A-25127 (.5945 inch inside diameter), and (b) examining all pistons for skirt cracks and for the need of reworking the bottom rib. As an alternative for these measures, CAA indicated that cam ground taper type pistons part No. 40731 may be installed with its larger outside diameter piston pin.

To enable users of these engines to meet CAA airworthiness requirements as soon as possible, Continental prepared special piston conversion kits for distribution through service stations and dealers. Pointing out that it is "impossible to supply all of the necessary pistons and piston pins overnight," the company requested its distributors to establish "some sort of a priority system and assume the responsibility of seeing that commercial operators and those that will be first affected by the '50 hours after Aug. 27, 1946' ruling are supplied kits first."

✦ **The kit,** containing materials have a list price value of more than $40 is being offered until Jan. 1, 1947, for $28.85, when the original pistons and pins are turned in along with the engine serial number.

L. E. Hallman, executive sales engineer for Continental, reported that as of Sept. 17 the company had shipped about 2,000 conversion kits and had a production rate of 90 daily.

✦ **The Aircraft** Owners & Pilots Association called upon Continental to make full adjustment for the required engine modifications by providing both parts and labor without cost to the owners. In turning down this proposal the manufacturer indicated that "such a policy would be very superficial and a misrepresented intent on the part of Continental that would rebound against the lightplane business for many years to come." In replacing the parts at factory cost, Continental is still allowing the usual discount for dealers and distributors.

Civil Plane Production Expected To Exceed 30,000 During 1946

U. S. manufacturers shipped 17,369 planes valued at $216,292,339 during the first seven months of this year, according to official figures of the Bureau of the Census. Of the total, 16,699 were civil and 670 military.

With civil production hitting at a better than 3,000 per month rate since May, output of such craft for the year should exceed 30,000 despite the many reconversion difficulties besetting industry.

✦ **Although representing** only a small fraction of total unit output, military production exceeded the civil in value $109,591,518 to $106,700,821.

Industry reports from all plants in active production show that civil aircraft shipments increased each month until July when a 1% drop occurred from the 3,429 June peak. The July figure of 3,388 represented a 276% gain over January's 1,227. Over 90% of the civil shipments were single-engine, two-place planes.

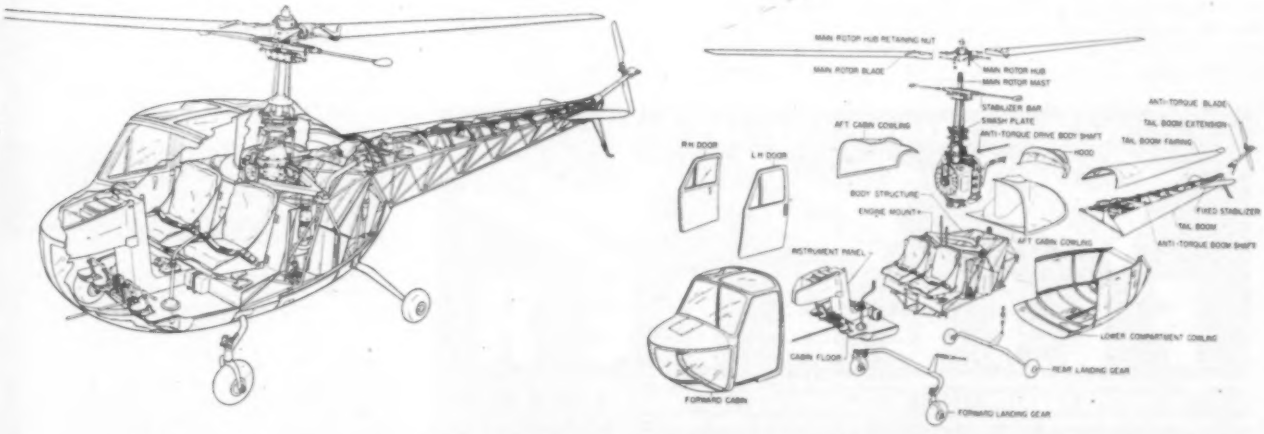
Unfilled orders on July 31 totaled 51,018 planes valued at $1,120,408,218. The civil plane backlog stood at 48,557 with value of $464,671,105.

Shipments of complete aircraft for the first seven months are shown below. Military experimental craft, helicopters, and gliders are excluded.

	Total Aircraft	Civil Aircraft
Jan.	1,321	1,227
Feb.	1,353	1,252
Mar.	2,154	2,019
April	2,462	2,311
May	3,198	3,073
June	3,489	3,429
July	3,452	3,388
TOTALS	17,369	16,699

To Modify Commandos

United Services For Air, with offices at 1006 Genesee Bldg., Buffalo, has leased the former Government Modification Center No. 7 at Niagara Falls Airport where it is planned to employ 500 persons in test work and the modification of Curtiss Commandos for civilian use.



Structural Features of Model 47— These two exploded views of the Bell Model 47 helicopter point up its structural and design features. The aircraft was scheduled for commercial deliveries in September. These are some of the major specifications: Overall length, rotor over antitorque propeller, 39½ ft.; overall height, 9.015 ft.; overall width over stabilizer bar, 8.33 ft.; cabin (internal length), 3.90 ft.; cabin (internal width), 4.30 ft.; cabin (internal height), 4.10 ft.; main rotor diameter, 33.75 ft.; anti-torque propeller diameter, 5.50 ft.; wheel tread, 5.85 ft.; gross weight, 2100 lbs.; weight empty, 1488 lbs.; normal useful load 612 lbs.; service ceiling, 9700 ft.

Continental Motors Production Goal Is 5,000 Units Per Month

A production capacity of 5,000 aircraft engines per month by the end of 1946 is the goal of Continental Motors Corp., which has been producing more than 90% of the powerplants used in lightplanes. L. E. Hallman, executive sales engineer has announced that his firm has been turning out 3,000 engines per month since June and expects to produce 4,000 during September.

Continental is spending $2,000,000 to expand its production facilities and its products are used to power $70,000,000 worth of lightplanes built since V-J day, Hallman reported. The Muskegon plant was in mass production of aircraft engines, 60 days after the end of the war.

The engine manufacturers have not been affected by labor difficulties at any time and have been able to maintain high production despite shortages that have cut deeply into other phases of the manufacturing industry. During the war, Continental was the nation's largest producers of powerplants for the armed forces.

In addition to the more popular 65, 75 and 85 h.p. light plane engines, Continental is currently producing powerplants of 125, 165, 185 and 220 h.p. The company is also undertaking the supplying of rebuilt aircraft engines on a plan similar to that practiced in the automobile industry. The rebuilt engines will sell for less than $200. Among the newer aircraft with Continental powerplant installations are the North American Navion, Cessna, Globe Swift and Piper Skysedan. These types are powered with engines of 125 h.p. and up.

Navion Gets ATC In Time For October Deliveries

North American Aviation announced that the CAA has issued an airworthiness certificate for the four-place Navion. Deliveries were expected to begin Oct. 1 against a backlog of $7,500,000 in orders, the company said.

The first Navion was granted its airworthiness license less than 48 hours after the 185 hp Continental engine was certificated by CAA. North American has produced 170 Navions thus far and currently is turning them out at the rate of six a day.

Chief Test Pilot—Alvin M. "Tex" Johnson, recent winner of the Thompson Trophy at the National Air Races, has been named chief test pilot for Bell Aircraft, succeeding Jack Woolams who was killed while testing a plane he planned to enter in the Cleveland event. It is expected that Johnson will take over the flight test work of the Bell XS-1, supersonic plane built for the AAF.

Kaiser Plant Producing Aluminum For Aircraft

A new source of much-needed aluminum sheeting has been opened up to aircraft manufacturers in the last two months through a new Kaiser plant at Trentwood, Wash., near Spokane. A spokesman for the company, which has been in mill production only since July, reports a good aircraft business in 24S gauge sheets as well as in special runs. The Kaiser firm, he said, has approached about 98% of all airplane manufacturers for orders, and has received some business from almost all.

The company, whose sheet production totaled 4,000,000 lbs. in August has maximum monthly capacity of 24 millions. Delivery dates of November and December are being quoted on some current orders, and the company is reported as keeping its 1947 delivery schedule open until quotas can be established.

MANUFACTURING BRIEFS

• Republic Aviation Corp., Farmingdale, N. Y., has reported earnings of $496,140 for the first half of 1946, based on sales, (including termination sales), of $18,849,311 for the same period. The earnings reported are after provisions for taxes and charges to reserve for post war readjustments of $777,580 incurred to date, representing abnormal costs arising from the conversion to peacetime operations and delays in deliveries of raw materials, production tools and equipment. The Republic backlog of business on June 30 was reported as $81,431,000, exclusive of Air-Cooled Motors orders. Firm orders for Rainbow transports and SeaBee amphibians now total $31,743,000 while military projects on hand involve $49,688,000. The engine subsidiary reported a loss of $490,166 for the first half of this year. Aircooled's June 30 backlog was $8,395,000, of which $4,420,000 represented orders other than Republic's.

• Prolonged strokes in the aviation industry that have held up the output of aircraft parts and accessories, have been blamed for the temporary curtailment of production of Skyranger private planes, manufactured by the Commonwealth Aviation Corp., with plants at Valley Stream and Port Washington, N. Y. Production of the Commonwealth Trimmer amphibian is to continue.

• Allison Division of General Motors has been assigned contracts to build the J-35 jet turbine engine for the Army Air Force. The powerplant is to be installed in Republic Thunderjet fighters, as well as other types for which details have not been released. Production is to be centered at the Indianapolis plant, according to E. B. Newill, general manager.

• The B. F. Goodrich Company, Akron, Ohio is leasing a government building adjoining Waco Aircraft Company in Troy, Ohio, it is announced by T. G. Graham, vice president. The plant, used for the manufacture of gliders during the war, will house the aircraft brake and wheel manufacturing division of the Goodrich company.

• Productos Aereos Pan Americanos, a Mexico City partnership of ex-WASP Helen A. Duffy and Prosper G. Tomich, has taken delivery on the first Republic Seabee to be exported. Miss Duffy ferried the amphibian from the Farmingdale plant to Mexico City via New Orleans and Brownsville, Texas. The firm, exclusive distributors for Seabees in Mexico, is reported to have orders for 75 planes. The second Seabee to be exported went to Leavens Brothers Air Service, Ltd. of Toronto, Canada.

Manufacturing Personnel

Leonard C. Peskin has resigned as vice president of Kellett Aircraft Corp., effective Sept. 10. Peskin was in charge of external sales and contracture relationships. No successor has been named.

Frank A. Maley has been appointed purchasing agent for Bell Aircraft Corp. He succeeds **Hugh A. Holmberg**, resigned.

D. A. Forward, a senior vice-president of The National City Bank of New York has been elected to the board of directors of Boeing Airplane and Aircraft Companies, it has been announced by president, **William M. Allen. J. O. Yeasting**, former assistant secretary-treasurer, has been named as assistant to Allen. Other recent Boeing appointments include **Jack V. Sheehan** and **Ralph Bell** to the sales engineering staff.

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TACA Reports Lack Of Working Capital And Loss Of Revenue

TACA Airways, S. A., and its subsidiaries presently are faced with a "critical working capital situation," the carrier reported in an amendment to its registration certificate filed with the Securities and Exchange Commission.

TACA said in its amendment that current requirements make it necessary that the company obtain additional capital of approximately $4,000,000 to continue its operations, complete the present equipment program and maintain adequate working capital within the next 12 months.

✦ **The amendment** pointed out that although the capitalization problem is receiving the full attention of TACA's management, no solution had yet been developed. It added that substantial economies were being affected through reduction of supervisory personnel and administrative facilities at Miami.

Unaudited company figures for the first half of 1946, showed operations of TACA and its subsidiaries on a consolidated basis had a loss of approximately $762,000. The company also reported that on the basis of preliminary figures, substantial losses were incurred during July and August of this year.

TACA told SEC that its Brazilian subsidiary had a loss of about $350,000 during the first half of this year, but that its Venezuelan associated company had an operating profit for the seven months ended July 31, 1946. No financial statement had been received from its Colombian associated company, the amendment said.

• Delta Air Lines reported today an operating profit of $634,827, or a net income of $362,114 after taxes and other deductions, for the fiscal year ending June 30, 1946. C. E. Woolman, president and general manager, announced the airline earned a profit of 90 cents per share on outstanding stock. During the fiscal year Delta maintained a load factor of 80 per cent, carried 410,312 revenue passengers, 4,830,383 pounds of mail, and 1,551,056 pounds of air express. Total number of revenue passenger miles flown was 150,071,985 as compared with 84,876,923 for the preceding year, and 51,843,940 for the fiscal year 1943-44. Delta completed 96.63 per cent of all schedule miles during the year, and personnel jumped from 962 to 2,350 employees.

• Northwest Airlines net profit for the fiscal year ending June 30, 1946, was $988,851, after deduction of all taxes and reserves. This represents an increase of 36% over the preceding year and shows an earning of $1.82 for each of the 543,870 shares outstanding at the year's end. Passenger revenue for the year just ended was $13,371,074, an increase of 68% over last year. Mail revenue fell off 10% but express and miscellaneous operating revenues were up $32,123, according to Croll Hunter, president and general manager of Northwest.

• Standard Aircraft Products, Inc., Dayton, Ohio, is reported in financial circles to have merged with its former subsidiary, the S. H. Thomson Co., and is now manufacturing automobile spotlights and therometers. Earlier this year, it was reported that the company had purchased the Clifford Manufacturing Co., of Boston, for a reported $1,250,000 cash.

• An estimated net profit after taxes for National Airlines of $188,460 for the first two months of the 1946-1947 fiscal year ended Aug. 30 has been reported by J. C. Brawner, treasurer. This compares with a profit of $59,305 for the corresponding period of 1945. The estimate, Brawner said, was based upon actual profits after taxes of $97,260 for July and $91,200 for August. Income before taxes, he said, was $162,100 for July and approximately $152,000 for August. A total of 28,228 passengers were carried by National over its routes between New York, Florida and New Orleans, during July. Revenue passenger miles totaled 16,640,811 for July and 16,713,842 for August—more than double the revenue passenger miles flown in July and August 1945.

• Geheral Aviation Equipment Co., Wilkes-Barre, Pa., has listed a total operations loss of $390,140 for the fiscal year, ended April 30. Net loss was reduced to $148,107, after giving effect to estimated recovery of the previous year's income and excess profit taxes of $242,032.

• United Aircraft Products, Inc., stockholders were to vote Sept. 26 at a special meeting at Dayton, Ohio, on an amendment to the articles of incorporation to reduce the authorized preferred stock to 46,434 from 75,000 as a result of the redemption of 28,566 shares. A vote was also to be taken on a proposal to split the common stock, two-for-one and increase the authorized capitalization to 800,000 common shares from 400,000 shares.

• Pan American Airways has announced that arrangements have been completed with New York banks for a credit of $40,000,000 to take care of cash requirements in the next 21 months. The interest rate is to be 1½% plus a charge of ¼ of 1% on unused balances. This credit is to be converted to a four year term loan with interest at 1¾% beginning July 1, 1948, at the option of Pan American. New York Trust Company is acting as agent.

• Eastern Air Lines has announced net earnings, after all charges for the company of $1,838,970 for the six months ended June 30, 1946, an increase of 115% over the same period in 1945. Net earnings were 76c per share for the first six months of this year, affecting the 2,395,572 shares outstanding. The operating revenues for the first half period were $17,885,614 with revenue passengers numbering 661,000.

• Luscombe Airplane Corp., sold $2,309,329 worth of airplanes during the first six months of this year. A force of 1200 persons are now engaged in turning out 14 planes a day, at the plant. Both fabric-covered and all metal wing models are in production. The number of planes sold during the first six month period, totalled 1,004.

Financial Comment

by

I. W. Burnham, II

of

Burnham & Company

Members of New York Stock Exchange

The Chairman of the Board of the Aviation Corporation, which is the largest stockholder in Consolidated Vultee Aircraft Corporation, recently announced that a merger between Consolidated Vultee and the Lockheed Aircraft Corporation is under consideration. If the proposed consolidation materializes, the resultant corporation would emerge as the largest American aircraft manufacturer. Using the last annual reports of both companies as a basis for measurement, the successor corporation would have total assets of approximately $228 million. Plant account would include $47 million of fully depreciated emergency facilities and $12.8 million of privately financed property, depreciated to a residual of nearly $8 million. Combined current assets approximate nearly $100 million. The peak year of sales volume, as for most other companies in the industry, was 1944 when $1,560 million of aircraft were produced by the two manufacturers. The current backlog of unfilled orders for both companies totals about $500 million.

✦ **The successor** corporation will encompass the three main areas of aircraft manufacture; namely, military, commercial and private airplanes. In the commercial field, complete coverage of transport planes would range from the 12-seat Saturn to the 300-seat Convair 37 and include the Convair 240, the Constellation, and the Constitution. Present indications suggest that other than aircraft operations of Consolidated will be purchased by the Aviation Corporation.

The proposed merger of Consolidated Vultee and Lockheed is the first post-war step in what may prove to be a period of integration and consolidation of an industry temporarily stimulated to a size far in excess of its peace-time market. The economic advantages of such a move are readily apparent and competitive forces may exert pressure in this direction upon other organizations in the industry.

Leading Aviation Securities

(Courtesy of Burnham & Co.)

NEW YORK STOCK EXCHANGE

	1946 High	1946 Low	Range for 6 Days Ended 9/6/46 High	Range for 6 Days Ended 9/6/46 Low	Range for 6 Days Ended 9/13/46 High	Range for 6 Days Ended 9/13/46 Low	Two Weeks Net Change
AIRLINES							
American Airlines	19⅞	12	13½	13⅛	13⅜	12	— ⅛
Braniff Airways	34⅝	17	24¼	23	20½	17	— 2⅞
Eastern Air Lines	31⅛	24⅜	31	27⅛	27¼	24⅝	— 3½
National Airlines	34⅞	19⅞	24⅝	21¼	23	19⅞	— 1½
Northwest Airlines	36½	31½	42⅛	38⅞	38	31½	— 6½
Pan American Airways	27	14⅛	17⅜	16⅝	16¾	14⅛	— ⅛
Penn.-Central Air.	45¾	26¼	38¼	32⅛	30	26¼	— 6⅛
Trans. & Western Air	71	36½	49	44¾	40	36½	— 6¾
United Air Lines	54¼	32½	41¼	37	35½	32½	— 3½
Western Air Lines	38	16¼	22¼	20¼	18	16¼	— 4⅛
MANUFACTURERS, ETC.							
Aviation Corp.	14⅜	7⅛	9⅜	8⅝	8⅛	7⅛	— 2⅛
Aviation Corp. pf.	82½	48⅜	56⅞	53½	51¼	48⅜	— 5⅛
Beech Aircraft	30⅞	12⅜	21⅜	18¼	16½	12⅜	— 3
Bell Aircraft	35½	18⅞	24⅝	22⅞	22¼	18⅞	— 1½
Bendix Aviation	58	34	45¾	42	37⅛	34	— 6
Boeing	39	22⅛	28⅝	28½	25¼	22⅛	— 1¼
Cons. Vultee	33⅝	20¾	24⅞	22⅝	23	20¾	— ⅝
Continental Motors	24	11	15	13⅛	13	11¼	— 1¼
Curtiss-Wright	12½	5¾	7¼	6¾	6⅜	6	— ⅜
Curtiss-Wright "A"	34½	18	21¾	20¼	19¾	18	— 2¼
Douglas Aircraft	108⅞	80	94	99¼	84	80	— 11
Grumman Airc. Eng.	52½	30¼	42½	37	36½	30¼	— 5½
Lockheed Aircraft	45¼	26½	32⅝	29⅛	28½	26½	— 3½
Martin, Glenn L.	45½	31	39¾	37⅜	34	33¼	— 4⅜
National Aviation	23¾	15¾	21	19	17⅞	15¾	— 1⅞
North Am. Aviation	16⅜	10⅝	13¼	12⅝	12¼	10⅝	— 1⅞
Republic Aviation	34⅞	12¼	16⅞	14	14⅜	12¼	— 1¾
Sperry Corp.	40½	22	28¼	26½	25	22	— 2
United Aircraft	37⅜	22½	28⅛	25⅜	24½	22½	— 2
Wright Aero.	82½	72	91½	89	88½	86	— 4

NEW YORK CURB EXCHANGE

AIRLINES							
Alaska Airlines	12	5¼	7	6⅛	6¼	5¼	— 1⅛
Colonial Airlines	43	18	23½	18¼	20	18	— 4
Northeast Airlines	21⅞	11	14½	12	12½	11	— 2⅛
Pan American Air. war.	14	4¼	8⅞	4⅝	5¼	4¼	— ⅛
MANUFACTURERS, ETC.							
Aero Supply 'A'	23½	20¾	....	....	....	....	....
Aero Supply 'B'	7¾	3½	4½	4	4⅜	3½	— ⅜
Air Associates	23½	12¾	15½	14½	14¼	12¾	— 3⅛
Air Investors	5¾	4½	4½	4½	4⅝	4½	....
Air Investors cv. pf.	38	37	37	37	....	....	....
Aireon Mfg.	17½	7	9⅞	8	8½	7	— 2
Aireon Mfg. pf.	22¾	10½	13¼	11½	12¾	10½	— ⅝
Aro Equip.	27½	15½	19	15½	18	15½	— 3⅛
Ballanca Aircraft	9½	3¾	5⅛	3¾	4⅝	4	— ⅝
Brewster Corp.	31½	18	21	19	20	18	— 1½
Browster Aero.	5½	4	4¼	4	4¼	4	....
Cessna Aircraft	12⅛	5	8⅛	5	5¾	5	— 1
Fairchild C. & I.	17⅞	10½	11½	10½	11¼	10½	— ⅛
Fairchild E. & A.	8⅜	4½	5¼	4⅝	5⅜	4½	— ⅜
Irving Air Chute	13½	8¼	10	8⅝	9⅛	8¼	— 1½
Northrop Aircraft	15½	8⅝	11½	8⅝	10¼	8⅝	— ⅝
Piper Aircraft	13¼	7	8¼	7⅛	7⅝	7	— ⅜
Roosevelt Field	9½	5¼	6½	5¼	5⅞	5¼	— 1⅛
Ryan Aero.	10⅛	6	7⅞	7	7⅛	6	— 1½
Solar Aircraft	29⅝	15	19½	17⅛	17	15	— 3⅝
United Aircraft Prod.	29½	14⅛	17⅞	14½	16¼	14⅛	— 3⅛
Waco Aircraft	9⅝	4½	5½	4½	5⅛	4¾	— ⅛

OVER-THE-COUNTER SECURITIES

	September 6, 1946 Bid	September 6, 1946 Asked	September 13, 1946 Bid	September 13, 1946 Asked
AIRLINES				
Air Cargo Transport	3⅛	3½	2⅛	2½
All American Aviation	5½	6¾	5	5½
American Airlines, cv. pfd.	91	92¼	85½	87¼
American Overseas Airlines	11⅞	12⅜	11¾	12¼
Chicago & Southern Air Lines	15	15¾	13¼	14¼
Continental Air Lines	17	18	14½	16
Delta Air Lines	34½	37	31	34
Emery Air Freight Corp.	3½	4⅛	3¾	4⅛
Expressaco Aereo	3¼	3¾	4¾	5⅛
Flamingo Air Services, Inc.	1	1½	1	1½
Flying Freight, Inc.	....	....	....	....
Great Circle Airways, Inc.	....	....	....	....
Hoosier Air Freight Corp.	1¾	2	2⅛	2½
Inland Airlines	8½	9½	8½	9½
International Airlines, Inc.	2¼	3	2¼	3
Island Air Ferries, Inc.	2	3	3	3½
Latin American Airways, Inc.	2¾	2⅝	3½	2⅝
Mid-Continent Air Lines	10½	12½	11¼	12
National Skyways Freight Corp.	2⅝	3	2¾	2¾
Public Flyers, Inc.	1¼	....	1¼	....
TACA Airways	7⅝	8¼	6⅝	7⅛
Trans Caribbean Air Cargo Corp.	2⅜	2¾	2½	2¾
U. S. Airlines, Inc.	....	....	....	....
MANUFACTURERS, ETC.				
Aeronautical Products	....	....	8¼	8
Aerovox	10½	10⅝	9¼	10
Aircraft & Diesel	1⅜	1¾	1⅛	1½
Airplane & Marine	11	14	10½	13
Central Airports	2	....	2	....
Columbia Aircraft	1⅛	1¾	1¼	1⅝
Continental Aviation & Eng.	3⅝	4	3¾	3½
General Aviation Equip.	1¼	1⅝	1¼	1½
Gladden Products	2½	2½	2¼	2½
Globe Aircraft	2¾	3⅛	2¾	3⅛
Harlow Aircraft	⅛	½	⅛	½
Harvill Corp.	2⅝	3	2¾	3⅛
Interstate Aircraft & Eng.	8½	9½	7½	9
Kellett Aircraft	3½	3⅝	2⅞	3⅛
Laer, Inc.	4	4¾	3⅝	3⅝
Liberty Aircraft	18½	19½	16½	17½
Luscombe Airplane	2⅛	2⅝	1⅞	2⅛
McDonnell Aircraft Corp.	....	8	....	8
McDonnell Aircraft Corp. pfd.	....	....	....	....
Pacific Airmotive	9½	10¼	9	10
Pollack Mfg.	15¼	15⅞	14	15½
Standard Aircraft Prod.	2⅝	2⅞	2⅛	2½
Taylorcraft	2⅛	3⅛	2½	3
Timm Aircraft	2⅛	2¾	2	2⅝

AMERICAN AVIATION
Operations and Maintenance Review
Including
COMMUNICATIONS—NEW EQUIPMENT—AIRPORTS

Wilson Adopts Long Range Airport Development Program

Specialists Retained To Put Former Navy Base on Map

A good example of how to prepare for commercial use of a set of bare surplus runways is provided in the recent experience and example of Wilson, N. C.

Wilson (population 20,000) had never had any sort of airport until the Navy released a war-built field which was used by the Marines as an auxiliary to the Marine Corps Air Station at Cherry Point. It came to the city with even fewer facilities than the average auxiliary airfield. Other than three first-rate asphalt runways, each 4500 feet long, it had nothing but a control tower structure and a small shack which had been used by the Marine guard at the field. All radio, lighting and crash facilities had been removed. It was a good airfield, but from a civic and commercial viewpoint, not an airport.

✦ **Wilson has** an active and air-minded group of civic leaders who felt that the city could afford an above-average airport. It has a good assortment of local industry demanding good transportation. It occupies a key location in the heart of the U. S. tobacco belt. It is favorably situated on established routes, attracts a great many outsiders at all times of the year and could expect to appeal to transient fliers. It has a high enough average income to give good support to both air transportation and private flying.

In undertaking to make the most of the community's aviation potential, city officials had to start from scratch. Wilson had never had commercial air service or even a fixed base operator. Any flying enthusiasts who lived there had to go to other communities to satisfy their enthusiam. Through and feeder airlines had not applied for stops at Wilson.

✦ **Lack of** established aviation facilities was not the city's major problem, however. Wilson knew nothing about municipal airport planning, construction or operation. They had no way of evaluating the area's aviation potential, of deciding how much to invest in immediate and future airport improvement, of determining how much nonaviation revenue could be developed around the airport, or of deciding which of several forms of management should be tried for the airport.

Wilson, like all other communities, at times had found it advisable to retain consultants or specialists on municipal problems such as water works, sanitation, traffic, etc. Realizing even before the field was declared surplus that it would present a particularly complex and many-sided problem, the city decided to retain an airport consulting firm qualified within a single organization to deal with every type of airport problem—economic, legal, engineering, architectural and operational.

For the over-all job, Wilson selected the firm of Public Airport Services, Inc., a Washington, D. C. organization headed by ex-Navy airport experts Leonard R. Hartenfeld and Harry Otis Wright, Jr. The contract called for a thorough study of Wilson's avviation problems, recommendations for appropriate airport development, and guidance on all problems during the first five years of commercial airport operation. Public Airport Services was founded on the belief that airport consultation calls for more than merely engineering and architectural advice. Its staff members and associates were selected on the basis of their experience and ability in dealing with every airport problem regardless of its nature.

✦ **One of** the first services rendered by the consulting firm was to cut the red tape which hampered official acquisition of the field. Although no longer being used by the military, and officially declared surplus by War Assets Administration, the field could not be taken over without first clearing a tangle of federal requirements with which the city was not familiar. Public Airport Services was able to expedite the transfer with little delay.

It should be noted that Wilson's airport land already was owned by the city. Contrasted with fields built by the Army and Navy entirely with Federal funds and owned outright by the government, the Wilson airport was constructed by the CAA on land contributed by the city, and then leased to the Navy for a period extending six months beyond the official end of the war. Since this period had not expired it is necessary in the case of all such airports to obtain a permit for use of the field pending official termination of the lease. In obtaining this permit, Public Airport Services first carefully examined runways and landing area to determine their condition so that the city in accepting the revocable permit would not waive any claims for damages to the airport.

✦ **Avigation easements** which the city had obtained prior to construction of the airport were examined by Public Airport Services' president Hartenfeld, who was airport attorney for the Navy Bureau of Aeronautics during the war. It was found that, through the initiative and foresight of Wilson's city manager, W. D. Wiggins, existing avigation easements were in perfect condition.

Also in advance of working out a long-range program for the city, the consulting organization was able to help with a problem which came up as soon as the field became the city's responsibility. Wilson had a choice of leasing it to a commercial operator for a fixed or percentage sum, of hiring a city-paid manager to operate and maintain the field, or of making an interim arrangement whicn would take care of the field until more carefully considered plans could be made. After discussion of various advantages and disadvantages it was recommended and agreed that as an interim arrangement two local veterans, anxious to set up charter and flight operations in Wilson, be granted a revocable permit to use the field. The arrangement insured immediate opening of the field, and relieved the city of the expense and responsibility of operations, maintenance and security.

Airways Weather Aid—Here is United Air Lines facsimile reproduction unit, to be installed at ground stations for the purpose of supplying employes with up to the minute weather maps. The special machine reproduces a 12 by 18 inch weather map in 20 minutes, in the same manner that pictures are transmitted by wire.

The long-term program for aviation development calls for employment by the city of a full-time airport manager, and the construction and ownership by the city of all permanent buildings, which will be leased to private operators.

✦ **Although a** definite program for initial and future building has been worked out, materials shortages have made it impossible to inaugurate the program and Wilson's initial problem was to scrape together enough make-shift facilities to put the airport in service. Public Airport Services worked out a practical and inexpensive plan for remodeling the Marine guard hunt into a temporary but satisfactory combination operations office and lounge room. They also obtained return to the city of the crash truck and lighting truck which the Navy had removed.

Wilson civic leaders took a realistic attitude toward the rather common tendency to over or under-estimate the need for airport facilities. Rather than grab some figures out of a hat and appropriate money accordingly, Wilson is taking no chances of ending up with too much or too little airport. Associated with Public Airport Services is one of the coun-

try's foremost transportation experts and city planners, Ernest P. Goodrich of New York city, who has a record of nearly 50 years of successful experience in these fields. Goodrich's study of economic factors in Wilson and the surrounding area will result in factual estimates of air traffic Wilson can contemplate for the next 20 years. These estimates will form the basis for a master plan designed to correlate the construction of facilities with the development of air traffic.

The master plan is being worked out in various stages from minimum immediate needs to the ultimate in facilities, buildings, and non-aviation activities adjacent to the airport. Actual progress from one stage to another will not be undertaken until air traffic develops to a point where the next stage of development is warranted, thereby preventing over-investment of city funds.

In addition to the master plan, two other major steps are being worked out at present. The first is preparation of engineering, architectural and economic data which will enable the city to make an early and accurate request for Federal funds which soon will be available for airport improvement. The other step is toward application and intervention in connection with C.A.B. route hearings which might bring commercial air service to the city.

Prefabricated Runway Lighting Systems Now Available To Airports

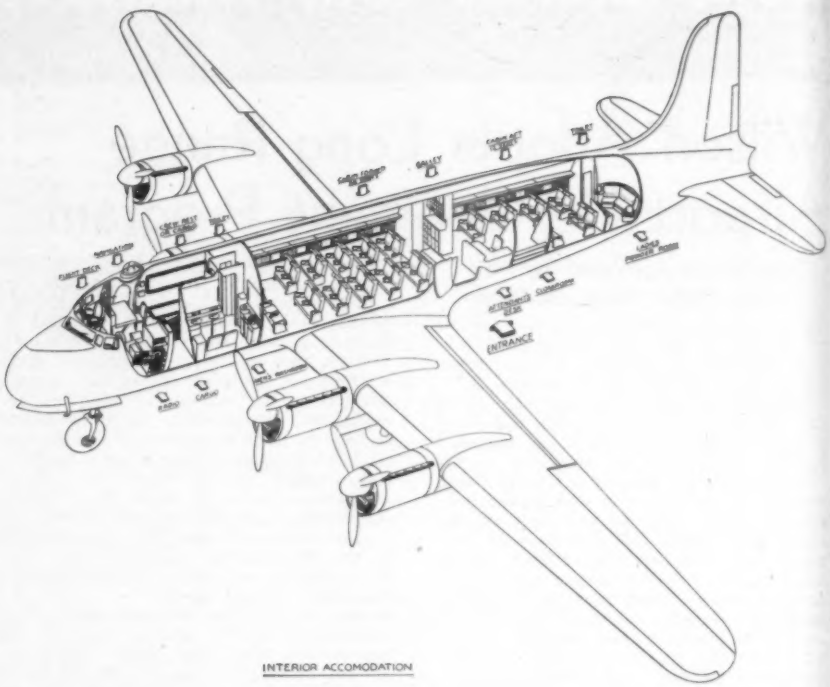
A prefabricated runway lighting system, outgrowth of wartime development in portable field lighting sets, is being announced by American Gas Accumulator Co., 1027 Newark Ave., Elizabeth 3, N. J. The AGA packaged lighting equipment includes all necessary fixtures, connections and controls, and offers the advantages of simplified installation, easy and infrequent maintenance, and relatively low cost.

Suitable for installation on any runway or landing strip from 1800 to 5000 feet, the equipment meets all government standards for candlepower, lens characteristics, wiring arrangement, controllability and safety.

✤ **Principal components** of the lighting package are: (1) a 230-volt, 60-cycle constant current regulator with a control panel for breaker type power switch, runway selector for three runways, intensity control for lamp intensities of 100, 30 or 10 percent brightness, and 15-amp. on and off breaker type snap switches for auxiliary circuits; (2) lamps rated at 45 watts for red and green lenses and 30 watts for clear lenses and built for 1000-hour life at full output; (3) specification lenses for runway, range and obstruction lights; (4) fixtures and cones for elevated runway marker lights; (5) insulating transformers with waterproof plugs connecting to power cable and lighting fixture; (6) runway cable in 200 foot lengths with waterproof plug at each end.

In installing the system, no soldering or clamping of wires is necessary since all connections are by means of plugs. Provision is made switching non-runway lighting equipment such as beacons, wind indicators and obstruction lights into the main control panel.

Canadians Claim New DC-4M Superior In Both Power And Speed To American Types



Cutaway Showing Interior of DC-4M

In addition to power and speed superior to U. S. models, the in-line powered DC-4M built by Canadair Limited for Trans-Canada Air Lines is being fitted with passenger accommodations expected to equal or exceed anything seen in the U. S. Reduction or elimination of factors contributing to passenger and crew fatigue is reported as Trans-Canada's major objective in designing the 40-passenger interior.

✤ **TCA reports** that particular attention is being given to selection of restful colors and materials which will reduce sound as much as possible. Lower sidewalls of the cabin are to be panelled with terra cotta vinyl plastic processed to give the appearance of grain leather. Upper walls and baggage racks will use a chartreuse gabardine fabric, and ceiling panels will be finished with a sound-absorbent Zephr fabric in cream beige color. Partitions enclosing galley, coatroom and other compartments will be finished in golden yellow Copomo wood veneer with a terra cotta plastic wainscoting. Carpet will be rose-beige, and cabin curtains selected are to have a chartreuse background with plaid pattern in white.

Different colors will be used on chairs in the main cabin section and on those in club seat section to the rear. Careful attention has been given to selection of seats with maximum comfort and adjustability, and seat arrangement has been planned to provide maximum leg room.

Three separate rest-dressing rooms have been designed into the DC-4M; one for crew members aft of the radio and navigator's compartments, one for men passengers forward of the main cabin, and another for women passengers aft of the main cabin. Both of the passenger dressing rooms have separate toilet compartments.

✤ **The galley** is located amidships. A special station for the cabin attendant has been provided with a desk, chair, instrument panel and stowage space for passenger service equipment.

Up forward, the crew has been provided with a number of wartime developments for long-range flying, including radar and Loran.

Latest reports on the Rolls Royce powered DC-4M give it a range of 3500 miles, maximum cruising speed of 325 mph, and efficient performance at altitudes as high as 28,000 feet.

Accidents Analyzed by CAB

A thirty page analysis and tabulation of non-air-carrier accidents during 1944 has been published by the Accident Analysis Division, Safety Bureau, Civil Aeronautics Board. The study covers all of the 3343 private accidents for that year which resulted in fatality, serious injury to personnel or heavy damage to aircraft.

CAA To Guard New Frequencies

The Civil Aeronautics Administration has announced that beginning January 1, 1947, CAA communications stations and control towers will maintain continuous guard on two new VHF frequencies. The frequency 122.1 mc will be available for air to ground communications by private aircraft enroute, and 122.5 will be guarded for air to ground communications at airport control towers.

Communications Play Major Role In Airline Progress

Lack of Adequate Electronic Facilities Still Evident

WITHIN the next few months U. S. airlines will have to start selecting and installing radio receivers and instrumentation for use with VHF omni-directional ranges and localizer-glidepath systems. This airborne equipment, differing in function and construction from anything now in use, still is in various stages of development and experiment. At least eight manufacturers are working to produce receivers with the required characteristics. Airlines will be faced not only with hastily selecting from the offerings of so many manufacturers, but with the serious probability that anything selected may become obsolete in a short time.

✦ **If the airlines** show a reluctance, shared by some of the equipment manufacturers, to invest in airborne equipment of only temporary value, they have little choice in the matter. The CAA despite a possible desire for further development, feels impelled to take positive action toward immediate installation of available aids to all-weather flying. Omni-directional range equipment on airways, and localizer-glidepath systems for airports, definitely are scheduled for early installation. A few installations already have been made to give the airlines something with which to test equipment and train pilots.

On established airways there will be a gradual transition from the present low frequency, four course range transmitters to VHF omni-directional range stations (which probably will include distance measuring equipment). New airways will get the new equipment at once, and carriers awarded routes along these airways won't be able to operate them without new equipment in their planes. The localizer-glidepath system selected by CAA may not represent the ultimate for speeding up airport traffic in poor weather, but it does represent a marked step forward and all airlines will use it rather than wait for something better.

✦ **At present,** airlines have only one source of aircraft receivers suitable for experimenting with CAA test installations. Aircraft Radio Corp. of Boonton, N. J., (a company which built the first range receiver used in airmail flights back in 1928, the radio equipment for Jimmy Doolittle's first completely blind flight in 1929, the first two-way radio for military fighter aircraft, and several other pioneering developments in civil and military aircraft radio) has an interim design of airborne equipment suitable for airline tests. However, it has not been designed for production in its present form, and it will not necessarily lead the developments of seven or more other manufacturers into production status.

In seeking information on the overall problem of airborne equipment suitable for the CAA's proposed ground installations, AMERICAN AVIATION received considerabe valuable data and personal opinion from K. F. Kellerman, commercial sales engineer for Aircraft Radio Corp. In addition to giving a description of the ARC equipment (too detailed to be reproduced in full but obtainable from the manufacturer) his comments include descriptive information on components and operation of the omni-directional system which bear quoting:

✦ **The VHF** omni-directional range system, as visualized by the CAA, provides:

a. For general aircraft control and exchange of information with the ground by VHF voice communication;

b. For navigation . . . by means of the VHF receiver with associated circuits and instruments which provide, for a lower weight in the aircraft, very much the same information as is now available with ADF equipment;

c. For instrument approach by flying the indications from VHF localizer and glide path receivers as read by the pilot on a cross pointer instrument;

d. For separate distance measuring equipment which would simplify the pilot's navigation problem by giving him exact distance to a known station in addition to the azimuth information obtained from the omni-directional range receiver.

"As indicated above, the pilot using the omni-directional range system obtains normal voice communication through VHF channels and, on instrument approaches, would fly the cross-pointer needle in a manner similar to the SCS-51 system. For navigation in flight he obtains electronically information as to his azimuthal position from the range station through the operation of an azimuth selector, which gives his track in degrees to or from the station; and the vertical needle of the cross pointer indicator, which serves as the left-right indicator with regard to his deviation from that track. He can home to the station or fly any desired course away from the station by adjusting the azimuth selector and then merely keeping the vertical needle in the center. By taking cross bearings on two stations he can locate his position accurately or, if distance measuring equipment is available, could navigate accurately on any course by reference to one station only.

✦ **"The operational** effect of the system may be likened to contact flying within sight of a searchlight revolving clockwise once per minute with a non-directional red light flashing each time the searchlight points north. If the pilot uses a stop watch to measure the time from the red flash to the time the searchlight beam passes him, he will be able to determine his bearing from the searchlight. For example, if it takes 15 seconds from the red flash until the beam passes him, the observer is on a 90-degree track, or due east, from the light; if it takes 30 seconds he is on a 180 degree track or due south. In effect, the ground omni-directional range station sends out equivalent electronic signals, and the converting equipment attached to the airborne receiver puts this information into the pilot's meters and controls automatically in readily usable readings.

Although no dates have been set by the CAA for inauguration of omni-directional ranges on various airways, it is apparent that development of ground equipment is ahead of airborne equipment. CAA's installation plans will push the radio equipment manufacturers, and the airlines, into a production and installation program considerably more accelerated than is normal for designing and proving new equipment.

AIA Publishes Aircraft Performance Specifications

Performance specifications of all U. S. transport and personal aircraft currently in production have just been tabulated and published by the Aircraft Industries Association. Aircraft in process of certification, as well as those already certificated by the CAA, are included in the list.

The AIA study shows that the U. S. civil aircraft industry consists of 29 firms producing a total of 47 models ranging in size from two place trainers to transports designed to seat up to 204 passengers. Certificated helicopters are included. Of the total, 40 are distinct types while the remaining seven are variations in power plant, seating arrangement, or cargo capacity.

Military aircraft, and several publicized civil types in advanced development but not ready for certification, are not included.

Operations—Maintenance Personnel

R. W. Hatch, with the AAF weather service since 1942, has returned to his former post as chief meteorologist for Mid-Continent Airlines.

Eastern Air Lines' new station manager at San Juan, P. R., is **U. D. McDonald,** formerly EAL terminal control manager in New York.

Andrew B. Cannon, former ATC colonel, has joined Capital Airlines-PCA as superintendent of line maintenance, assisting Barney Vierling at Washington National Airport. Cannon started flying in 1927 and has built up over 9,000 hours of pilot time.

Rudolph Burda, who joined Pan American Airways at Brownsville in 1937 and has since worked throughout Central America as a mechanic and section superintendent, has been promoted to the post of station manager at David, R. P.

E. C. Twing, TWA assistant station manager at San Francisco, has been transferred to station manager at Winslow replacing **Joe Kasulaitis** who is on special assignment under the western region transportation manager.

United Demonstrates Instrument Landings

The first commercial transport to be equipped for automatic instrument landings, a United Air Lines' DC-4 using the Sperry A-12 electronic automatic pilot, recently was given its first public showing.

Using localizer-glidepath facilities installed at MacArthur Field on Long Island, the UAL Mainliner, with newsmen and industry representatives as passengers, repeatedly was brought in on final approach to within a few feet of the runway with pilot and copilot riding 'hands-off.' Approaches into the localizer beam were made from ten to fifteen miles out from the field, with automatic control down the glide path starting about five miles out. Pilots simply monitored the cross-pointer indicator until over the runway and ready to make the actual landing.

United, which has been testing the autopilot for several months, both on instrument landings and on routine flying, has announced plans for A-12 installation on all DC-4s, DC-6s and Martin 303s, together with necessary pilot training in instrument landings, to keep pace with CAA installation of localizer-glidepath facilities at major airports.

Stinson Dealers Receive Advertising Sign Catalog

Stinson Aircraft Division of Consolidated Vultee, is sending all Stinson dealers a new dealer sign catalog from which they can select outside signs publicizing the dealer's name and Stinson sales and service.

Complete dimensions, lettering diagrams and color charts are included to permit dealers to give local sign makers a full description of what they want. Stinson simply provides instructions and suggestions, not the actual signs.

The catalog gives hangar sketches to show suitable location of the different sign types. The display includes, neon, flourescent, and unlighted signs.

Martin Reports Navy Order For 20 Mariner Amphibians

Glenn L. Martin Co., announced that the Navy has ordered 20 Martin Mariner amphibians, with prospects that the order may be increased at a later date. The aircraft will be identical in many regards with the combat PBM-5 flying boat, including armament, guns, turrets, bomb bays, radar and other equipment. Retractable tricycle landing gear is added.

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30 Hour Check

By DAVID SHAWE

Airline and government experts from all over the world will start gathering at Indianapolis in a few days, under CAA-PICAO sponsorship, to study U. S. developments in instrument landing systems, radar, facilities for long-range navigation, etc. After Indianapolis, the experts will go to Montreal for similar demonstrations of Canadian equipment. They already have seen, and apparently been impressed by British developments. After seeing every available type of equipment in operation, PICAO will conduct an evaluation meeting attempting to select and standardize on the best airborne and ground equipment, regardless of its nationality, for international air operations.

It quite obviously is important, to U. S. airlines and to U. S. equipment manufacturers, that the Indianapolis show be a good one. Knowing this, the CAA's Experimental Center at Indianapolis, aided by officials from Washington, has put a tremendous amount of effort into preparing for the demonstrations. They want foreign delegates to go away sharing their own enthusiasm for U. S. developments.

It is not likely that any serious hitches will develop in the demonstrations. CAA for some time has been showing its facilities to airline representatives, APLA delegates, and government officials. Although much of the equipment used is still in the experimental stage, the CAA knows how to use it.

It will take considerable time, nearly three weeks, to give all of the foreign experts a thorough demonstration. This is due primarily to the fact that few of the delegates will be satisfied to ride along as cabin passengers while a DC-C makes a localizer-glidepath landing. They will want to be standing right behind the pilot, and although the CAA has developed a few large remote-reading instruments for the cabin they haven't been able to modify a DC-3 for all passengers to look over the pilot's shoulder. The same goes for demonstrating various high-intensity airport and approach lighting systems, navigation by omni-directional ranges, and airborne and ground surveillance radar.

The Indianapolis show is taking time and careful planning, but the people working on it hope it will be justified when U. S. equipment is compared with that of other countries for international adoption.

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Down in Mexico City the rarified atmosphere makes it a little difficult to get a loaded airplane into the air with the same power and technique used at most U. S. fields. To get some new doctrine on the problem, American Airlines, Pratt & Whitney, and the CAA are conducting scientific and photographically recorded tests with a DC-4 at Mexico City. Flap settings, carburetor adjustment, and weight and balance are getting particular attention.

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A levelling-off point for airline equipment expansion seems to be approaching. Pan American's Latin American division, with an announced 500 percent expansion plan, has taken delivery on its 22nd DC-4 conversion. The remainder are expected during October and November. American Airlines contract with Republic Aviation Corp. for conversion of 39DC-4s already is taken care of and only 4 more ships, which have been in use for pilot training, remain to go through the mill.

New Equipment

Vacuum Blast Cleaner

The Vacu-Blaster, a new-principle blast cleaning device for cleaning or refinishing metal, concrete or other hard surfaces, is now in production by the Vacu-Blast Co., Inc., 1054 Broadway, Burlingame, Calif. The

machine operates on a unique vacuum return system which permits no abrasives or other particles to escape into the open and which automatically cleans and returns usable abrasive to the blast gun.

Mask, goggles or protective clothing are not needed when using the Vacu-Blaster, and the vacuum return system is sufficiently positive that nearby articles need not be removed or covered for protection.

Lavatory Service Cart

Draining, flushing and recharging lavatory systems on large aircraft is considerably speeded and simplified with a new service cart developed by Greer Hydraulics, Inc., Brooklyn 18, N. Y. The unit, mounted on four automotive type wheels, incorporates all necessary tanks, hose lines, and pumps for thorough and rapid lavatory servicing. The machine is of streamlined design in keeping with the airline policy of having only attractive equipment used on the ramp.

Inkless Tachometer Recorder

A tachometer recorder suitable for use with aircraft-style tachometer generators has been announced by General Electric Co. The device provides an automatic and continuous record of rotation speeds, using a 4-inch record roll marked by means of a typewriter ribbon rather than fluid ink. Standard chart speed is 3 inches per hour, but different gears are available for speeds of one inch per hour, two inches per hour, or one inch per day.

Scale range from zero to 3000 rpm is provided, but for aircraft tachometer generators the normal scale is from 600 to 2500 rpm with readings accurate to within 1.5 percent of full scale with full scale deflection obtained in two seconds.

The recorder is enclosed in a weatherproof and splashproof case, measures slightly over five by eight inches, and weighs 12 pounds. Additional information is available from the Apparatus Dept., General Electric Co., Schenectady, N. Y., in Bulletin GEA-4703.

'Multi-Flex' Ducting

United States Rubber Co. has announced a new non-metallic hot air duct for aircraft thermal heating systems. Known as Multi-Flex, it is made of glass fabric impregnated with heat-resistant rubber and plastic. Weight is reported less than half that of aluminum tubing, with heat resistance adequate for 500 degree air temperatures. Diameter range is from one to six inches in lengths up to eight feet. It can be produced in either rigid or flexible form.

'Airway' Pilot Goggle

American Optical Co., Southbridge, Conn., announces that civilians now may obtain a Navy-developed aviation goggle described as an improvement over the company's former Transport goggle. The goggle may be obtained either with glare-reducing lenses or with non-absorbing lenses. Other improvements listed for the Airway goggle are greater field of vision plus better binocular vision, better comfort and adjustability, and improved ventilation.

Allied Control Changes Name

Allied Control Co. of California, producers of wind and engine driven aircraft generators and engine starters, has changed its name to Pierson Electrical & Engineering Corp. Address remains at 1633 S. Hope St., Los Angeles. R. T. Pierson is president of the firm.

Erect Jet Test Cells

General Electric Co., has awarded a contract to the Turner Construction Co., for the erection of a group of buildings including two cells for the testing of jet propulsion engines, at West Lynn, Mass. Work is to begin at once on the $500,000 project, scheduled for completion within six months.

Torque Wrench for Spark Plugs

This spark plug wrench, which automatically prevents exceeding the manufacturer's recommended torque in inserting plugs, has been developed by Airdraulics Engineering, Inc., New Canaan, Conn. Prescribed pressure

can be preset by means of a setting dial. A friction disc mechanism automatically releases the wrench when proper torque is reached. The wrench, nine and a half inches long, weighs only slightly more than six ounces.

Smallest Aircraft Tachometer

General Electric Co. has produced a magnetic-drag type tachometer indicator believed to be the smallest developed for aircraft use. Ordered by a West Coast manufacturer for a new plane, the instrument has a scaleplate one-third smaller than standard, and weighs correspondingly less, with little sacrifice in readability. Limited instrument panel space in the new plane prompted the development.

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